

STANISLAV PATYRIN

**TOURISTS' GENERATED CONTENT ABOUT THEIR MOST
MEMORABLE EXPERIENCES, EMOTIONS, AND SENTIMENTS
ABOUT ILE-ALATAU NATIONAL PARK ON GOOGLE MAPS.**



**UNIVERSITY OF ALGARVE
FACULTY OF ECONOMICS**

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**Masters in Tourism
Organizations
Management**

**Dissertation made under the
supervision of:**

Prof. Nelson de Matos

**Prof. Marco Paulo dos Santos
Carrasco**



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Work Authorship Declaration

I declare to be the author of this work, which is unique and unprecedented. Authors and works consulted are properly cited in the text and included in the reference list.

(Stanislav Patyrin)

.....

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Summary

This work seeks to understand the visitor experience, emotions, and sentiments at Ile-Alatau National Park by analyzing online visitor reviews. The main goal was to conduct an in-depth examination of 5,911 reviews using Aspect-Based Sentiment Analysis (ABSA) to provide insights that can guide tourism organizations in refining their management practices.

The tourism experience framework provides key concepts and actionable suggestions for organizations' managers, among which are natural parks, elevating the quality of visitors' experiences and creating among them profound moments that contribute to leaving long-lasting memories. Through ABSA, the study categorized aspects and revealed how these elements contribute to either positive, memorable experiences or areas of dissatisfaction. Certain factors, like family-friendliness, fostered strong emotional connections, while others, such as commercialization and waste management, detracted from the overall experience.

A SWOT analysis is conducted to deepen the study, assessing the park's strengths, weaknesses, opportunities, and threats. This framework emphasized strengths, such as the park's scenery, air quality, location, proximity, tranquility, and ability to evoke positive emotions. Simultaneously, it highlighted areas needing improvement regarding infrastructure, crowds, staff/service, accessibility, and environmental impact. The results identified in the research indicate that these problems are significant detractors of the visitor experience.

The results' conclusions and the bibliographic review of relevant topics culminated in actionable recommendations to enhance the park's tangible aspects and emotional resonance, creating more profound, meaningful connections with its guests.

Keywords: aspect-based sentiment analysis, natural parks, visitor experience, tourism management, visitor satisfaction, Chat GPT.

Resumo

Este estudo procura compreender a experiência turística, emoções e sentimentos dos visitantes do Parque Nacional de Ile-Alatau através da análise de seus comentários feitos online. O objetivo principal foi de analisar em profundidade 5.911 avaliações dos visitantes utilizando a Análise de Sentimentos Baseada em Aspectos (ABSA), para oferecer uma compreensão detalhada das percepções dos visitantes às organizações turísticas de modo a melhorarem as suas práticas de gestão.

O quadro teórico da experiência turística fornece conceitos e sugestões de ações para gestores de organizações, como parques naturais, contribuindo para a melhoria da qualidade das experiências dos visitantes. Além disso, ajuda a criar também momentos emocionais mais intensos que favorecem a formação de memórias duradouras das experiências no(s) parque(s). A revisão bibliográfica dos temas, experiência turística memorável, emoções e sentimentos, bem como o papel das avaliações online, forneceu o contexto necessário para procurar compreender como o feedback dos visitantes capta a profundidade emocional das suas experiências e contribui para a formação de memórias duradouras. Ao analisar como diferentes elementos do parque moldam a satisfação geral, tanto de forma positiva como negativa, o estudo explorou como esses sentimentos são compartilhados e refletidos nas avaliações online.

Através da ABSA, conduzida com recurso ao ChatGPT, um Modelo de Linguagem Ampla (LLM) com um prompt personalizado, o estudo categorizou os principais aspectos que influenciam as experiências dos visitantes, como a beleza natural, a limpeza e as interações com o staff. A capacidade avançada do LLM para interpretar linguagem complexa e emoções subtis permitiu uma atribuição precisa de pontuações de sentimento, sem necessidade de treino prévio extensivo em datasets específicos. A análise revelou como estes elementos contribuem para a criação de experiências positivas e memoráveis ou geram áreas de insatisfação. Fatores como a beleza natural fomentaram fortes conexões emocionais, enquanto problemas relacionados com a limpeza e as condições das instalações prejudicaram a experiência global.

Para aprofundar a análise, foi realizada uma análise SWOT (Forças, Fraquezas, Oportunidades, Ameaças), avaliando os pontos fortes, fracos, oportunidades e ameaças do parque, tendo por base os resultados da análise de sentimentos. Isto permitiu identificar

pontos fortes do parque, como a sua beleza natural e a capacidade de evocar emoções positivas. Simultaneamente, a análise identificou áreas que necessitam de melhorias, particularmente no que diz respeito à infraestrutura e manutenção, que impactam negativamente as experiências dos visitantes. Esta avaliação fornece um caminho para a gestão do parque melhorar tanto a qualidade emocional como a experiência turística (e.g., física) das visitas futuras.

Os principais aspectos identificados incluem beleza natural, limpeza, instalações, acessibilidade, serviço/atendimento e atividades. As pontuações de sentimento atribuídas a estes aspectos revelam insights valiosos sobre a satisfação dos visitantes e áreas que necessitam de melhorias. Os resultados destacam as forças do parque, como a sua beleza natural e qualidade do ar, enquanto enfatizam desafios relacionados com a limpeza, instalações e acessibilidade. A pesquisa oferece recomendações práticas para a gestão do parque, com o objetivo de aumentar a satisfação dos visitantes e melhorar a experiência geral.

A integração da análise de sentimentos com uma revisão estratégica do desempenho do parque oferece insights valiosos sobre como as emoções, memórias e sentimentos dos visitantes moldam as suas percepções. As descobertas proporcionam recomendações práticas destinadas a melhorar tanto os elementos tangíveis do parque como a ressonância emocional da experiência dos visitantes. Melhorias na manutenção e na gestão de resíduos, por exemplo, podem reverter percepções negativas e elevar a satisfação geral dos turistas.

A beleza natural do Parque Nacional de Ile-Alatau é amplamente apreciada, sendo frequentemente mencionada nas avaliações como um dos principais atrativos. Os visitantes elogiam as paisagens deslumbrantes, as vistas panorâmicas e a pureza do ar, fatores que enriquecem a experiência global. Estes elementos foram também identificados como pontos fortes a serem explorados nas estratégias de marketing do parque. Por outro lado, aspectos como a limpeza surgem frequentemente nas avaliações

como áreas de preocupação, com visitantes a destacar a necessidade de práticas mais eficazes de gestão de resíduos e manutenção.

As instalações do parque, como casas de banho, áreas de piquenique e bancos, foram também destacadas como inadequadas ou mal conservadas. A modernização destas instalações, juntamente com melhorias na acessibilidade — especialmente nas estradas e sinalização — foi vista como necessária para melhorar a experiência geral. Além disso, a pesquisa revelou que o atendimento ao cliente recebeu feedbacks variados; enquanto muitos elogiam a simpatia e o conhecimento dos funcionários, outros relataram experiências negativas. As atividades recreativas oferecidas, como trilhos para caminhadas e visitas guiadas, são altamente valorizadas, mas existe potencial para expandir e diversificar as opções, o que poderia atrair um público mais amplo. A pesquisa sugere ainda que programas de educação ambiental e sensibilização poderiam ser implementados para aumentar o envolvimento dos visitantes na preservação do parque e promover práticas de turismo sustentável.

Palavras-chave: análise de sentimentos baseada em aspetos, parques naturais, experiência do visitante, gestão turística, satisfação do visitante, Chat GPT.

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LIST OF ABBREVIATIONS

ABSA - Aspect-Based Sentiment Analysis

API - Application Programming Interface

LLMs - Large Language Models

MTEs - Memorable Tourism Experiences

NLP - Natural Language Processing

OLLE - Once-in-a-Lifetime Leisure Experiences

SWOT - Strengths, Weaknesses, Opportunities, and Threats analysis

UGC - User-Generated Content

1. INTRODUCTION

In the digital age, the significance of online reviews has become paramount, particularly in the tourism sector. As travelers increasingly rely on the internet for planning and decision-making, the role of online reviews has evolved into a critical component influencing their choices, and this is the case of national parks, where visitor experiences vary widely based on many factors (González-Rodríguez et al., 2022).

The advent of online platforms such as Google Maps, TripAdvisor, and 2GIS has revolutionized how tourists gather information and make travel decisions. These platforms provide a wealth of user-generated content (UGC) that offers insights into destinations, accommodations, dining options, and attractions. Unlike traditional marketing materials, online reviews are often viewed as more authentic and trustworthy, showcasing genuine experiences from fellow travelers (Lopes et al., 2023). This credibility makes peer reviews a vital influence in the decision-making process for prospective visitors of destinations, resorts or even nature parks. Positive online reviews can generate excitement and anticipation, encouraging individuals to explore a specific nature park (Mahat & Hanafiah, 2020).

On the other hand, negative feedback can create hesitation or diminish expectations, potentially resulting in a more critical perspective on the visit (Majeed et al., 2020). They provide insights into various aspects of the nature park experience, including trail conditions, facility maintenance, and visitor congestion (Munar & Jacobsen, 2014).

Ile-Alatau National Park, located in Kazakhstan's Tien Shan mountain range, presents a case study for understanding visitor experiences and perceptions. This park was chosen for its extensive size, unique natural features, and potential for development as a premier tourist destination. Its vast and diverse landscape provides visitors with opportunities to engage with a wide array of flora and fauna, making it a haven for nature enthusiasts. Additionally, the park's relatively underdeveloped tourism infrastructure offers a unique opportunity to analyze how raw, authentic nature experiences contribute to a memorable experience. Understanding the feelings and sentiments expressed through online reviews at this unique location is essential for managing tourism effects and

ensuring the park's sustainable future. These reviews not only provide unique insights into the park's offerings but also pinpoint opportunities for enhancements, allowing visitors to contribute to the park's ongoing development (Liu, 2015).

Therefore, the main goal of this dissertation is to analyze the online reviews of tourists visiting Ile-Alatau National Park using Aspect-Based Sentiment Analysis (ABSA). ABSA is a natural language processing (NLP) technique that breaks down textual data to identify sentiments associated with specific aspects of a product, service, or experience (Zhang, 2023).

This approach provides a deeper understanding of perceptions, crucial for refining tourism management strategies (Zhang, 2023).

The specific objectives set of this dissertation are:

- To review the state of the art regarding the key theoretical concepts, memorable tourism experience, emotions, and sentiments;
- To assess tourists' experiences (positive and negative) at the Ile Alatau National Park;
- To verify how experiences contribute and relate to memories, emotions, and sentiments.

The research has the following structure:

1. Introduction—This chapter introduces the importance of online reviews in the tourism sector. It outlines the specific research questions, particularly how emotional responses and memorable experiences can be analyzed through online reviews to inform better park management. It also provides an overview of the subsequent chapters.

2. Literature Review—This chapter explores existing literature on Memorable Tourism Experiences (MTEs) and how emotions and memories shape tourist behavior. It delves into how memories and feelings contribute to satisfaction and loyalty, by relying on the Experience Economy (4E) framework for understanding Flow and how to stage memorable tourist experiences. The review also examines the significance of sentiment analysis in understanding the emotional depth of UGC, providing the theoretical foundation for applying ABSA in this research.

3. Methodology—This chapter outlines the methodology employed to assess UGC. The methodology leverages ABSA to categorize online reviews into specific aspects. In addition, this chapter describes the data design, collection and analysis process of UGC to capture sentiments and emotions. It delves deeper into how psychological engagement elements of OLLE could be integrated with the 4E framework.

4. Results and Discussion—This chapter presents the findings and discussion of the sentiment analysis, highlighting the responses to key aspects. The results reveal how certain elements evoke strong positive or negative emotions, which, in turn, affect the memories tourists form of their visit.

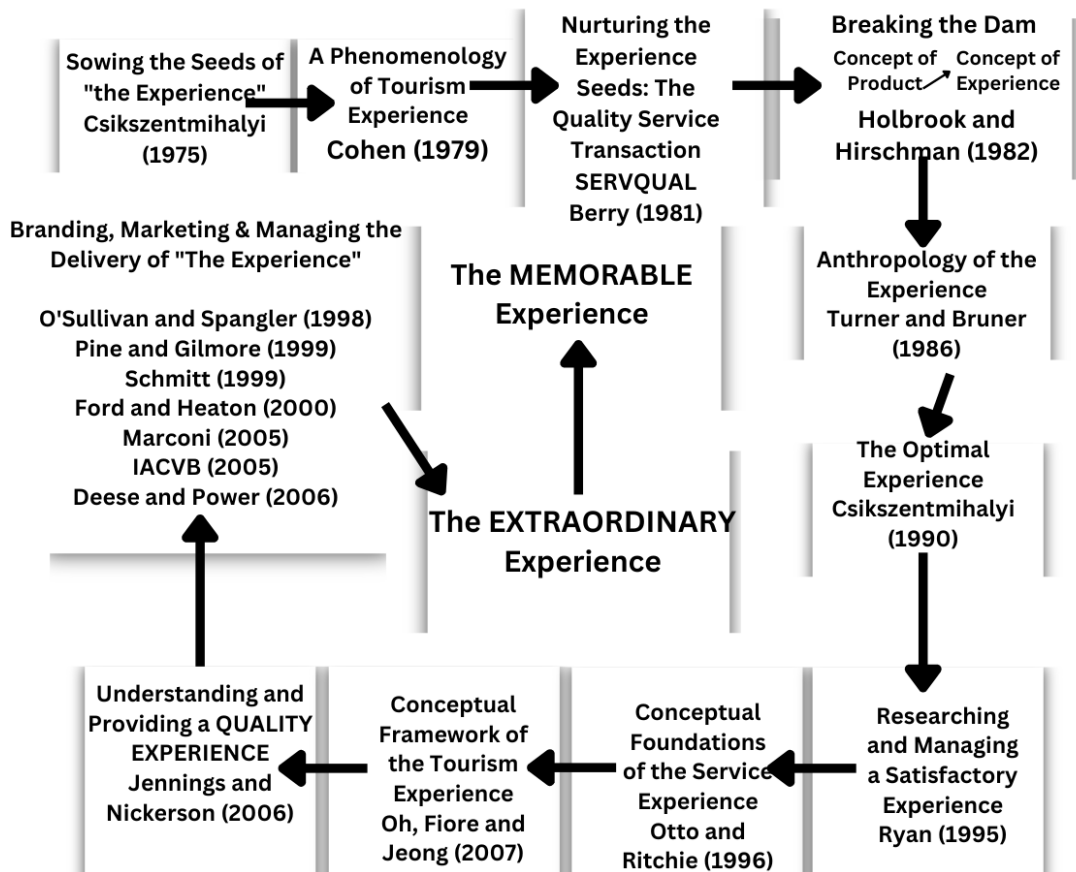
5. Conclusion—The final chapter discusses the broader implications for tourism management. It also suggests directions for future research, such as expanding the use of ABSA, and addresses the study's limitations.

2. LITERATURE REVIEW

2.1 Memorable Tourism Experiences

Various foundational theories and frameworks have shaped the evolution of Memorable Tourism Experiences (MTEs) which Ritchie et al. (2011) synthesized (Figure 2.1) into a comprehensive overview. MTE refers to a tourism experiential event that leaves a lasting positive impression on tourists, influencing their long-term memories and attachment to a destination (Ritchie et al., 2011). The concept of MTEs highlights how tourists form emotional connections with events through immersive, emotionally engaging, and culturally significant experiences (deMatos, Duarte & Sá, 2022; Ritchie et al., 2011).

Figure 2.1 Evolution of Extraordinary and Memorable Tourism Experiences



Source: Adapted from Ritchie and Hudson (2009: 420).

One of the critical theories contributing to the understanding of MTEs is Csikszentmihalyi's Flow Theory (1990), which emphasizes how individuals achieve optimal experiences when fully immersed and engaged in an activity. This immersion is essential in creating extraordinary and memorable moments during travel, ensuring that tourists recall these experiences positively over time (Csikszentmihalyi, 1990; deMatos, Duarte & Sá, 2024). These peak experiences, characterized by deep emotional involvement, stand out as highlights of a trip (deMatos et al., 2024).

The shift from product to experience in tourism was notably driven by Holbrook and Hirschman (1982), who argued that emotional and sensory engagement, rather than just physical products, plays a crucial role in tourism experiences. This perspective highlighted that it is not just the physical attributes of a destination but how tourists emotionally engage with the destination that defines memorable moments (Holbrook & Hirschman, 1982; Schmitt, 1999).

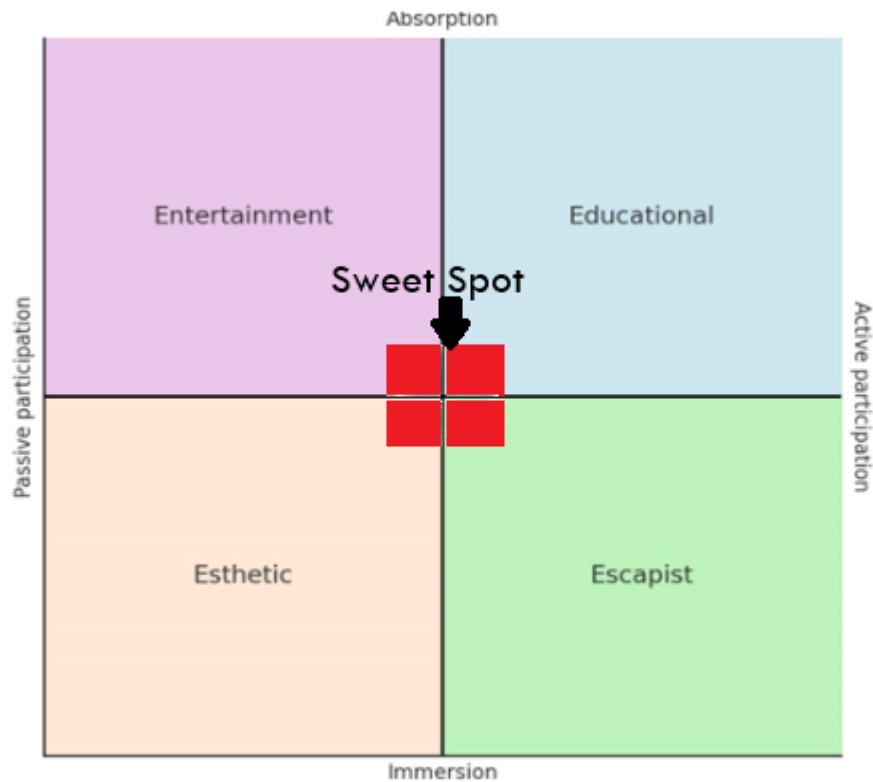
As tourism research advanced, Turner and Bruner's *Anthropology of Experience* (1986) added depth to the understanding of MTEs by exploring the significance of cultural immersion. Their work suggested that extraordinary tourism experiences often arise from deep engagement with local traditions and cultural practices, allowing tourists to form stronger emotional connections with the destination (Turner & Bruner, 1986). Tourists who actively participate in local culture rather than merely observe are likely to have long lasting memories (deMatos et al., 2024).

Introduced by Pine and Gilmore's (1999) at the end of the 90s, the Experience Economy perspective, redefined how tourism businesses approach the tourists' experience. The authors proposed that companies, organizations should move beyond simply delivering services and instead focus on staging experiences that evoke emotions and create lasting memories. This perspective emphasizes the importance of designing experiences as carefully orchestrated events, much like theatrical productions, where tangible and intangible elements are combined to craft unique, memorable, and marketable experiences (Ford & Heaton, 2000). By framing tourism experiences in this way, Pine and Gilmore's work laid the foundation for understanding how destinations can engage visitors on a deeper level, transforming ordinary trips into extraordinary and emotionally resonant journeys (Pine & Gilmore, 1999).

2.2 Experience Economy(4E) Framework

The 4E framework is a foundation for understanding and enhancing experiences (Pine & Gilmore, 1999).

Figure 2.2 Experience Economy Framework



Source: Adapted from Pine and Gilmore (1998)

This model is valuable for understanding how organizations can provide a range of experiences that cater to different types of interactions, from passive enjoyment to active participation (Pine & Gilmore, 1999). In the 4E framework, the "sweet spot" represents (Figure 2.2) the convergence of all four realms of experience, creating the most compelling and unforgettable experiences (Garrod & Dowell, 2020). This intersection maximizes the potential to appeal to diverse aspects, fostering intellectual and emotional connections (Kim et al 2012).

Entertainment involves experiences designed to captivate and hold the audience's attention through passive entertainment. The realm of Education focuses on increasing the knowledge or skills of participants through active engagement (Pine & Gilmore,

1999). In this context, visitors actively participate in the learning process, participating in informative and intellectually stimulating activities (Guerreiro et al., 2025).

Escapism encompasses experiences that fully immerse visitors, allowing them to participate and engage in an environment or activity. In this realm, visitors are not just passive observers but are actively involved, often physically or emotionally (Pine & Gilmore, 1999). Esthetics plays a crucial role in creating immersive experiences, where the environment and surroundings provide sensory pleasure without requiring active participation (Guerreiro et al., 2025). This means preserving and enhancing for example a park's natural beauty—its landscapes, biodiversity, and serene ambiance—to offer visitors a deeply satisfying and visually captivating experience (Ballantyne et al., 2009). Such aesthetic experiences form the foundation of a high-quality visit, as they engage the senses and create a lasting emotional connection with the environment (Valente-Pedro et al., 2024).

Besides this approach, by the early 2000s, researchers (e.g., Jennings & Nickerson, 2006) started to investigate the quality of tourism experiences. Jennings and Nickerson (2006) emphasized that delivering exceptional service and attention to detail is essential for fostering repeat visits and positive word-of-mouth. Together, these elements elevate the visitor experience, ensuring that for example the natural park not only meets but surpasses visitors' expectations, leaving a lasting impression on them (Jennings & Nickerson, 2006). More recently, deMatos et al. (2021; 2024) found that individuals are increasingly motivated to invest in experiences that foster enjoyment — a core aspect of Flow — which in turn can be remembered over time. Flow aligns with the consumer behavior shift toward experiences, a trend Pine and Gilmore (1998) identified in their Experience Economy theory. This shift signifies that consumers are now valuing experiences over material possessions. This underscores the need to reexamine optimal psychological states, Flow through new perspectives and dimensions to enhance understanding of how it shapes and enriches MTEs (de Matos et al., 2024).

2.3 Flow Role on Tourism Experiences

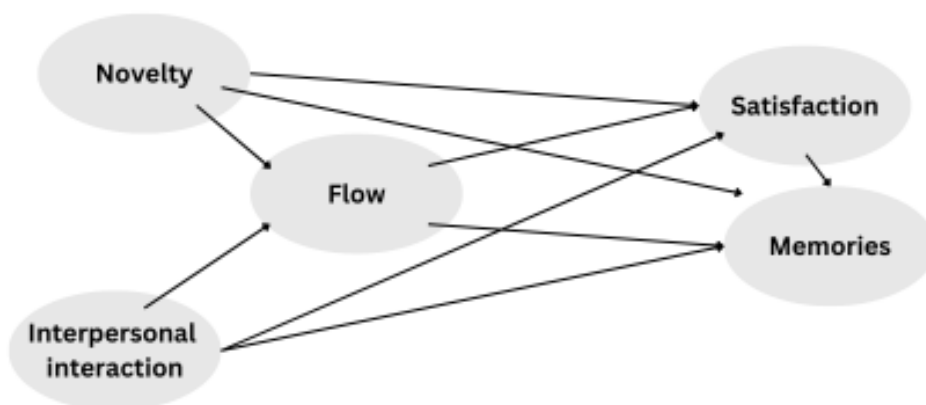
Once-in-a-Lifetime Leisure Experiences (OLLE) are unique, once in a lifetime extraordinary events or activities that tourists engage in, often characterized by high levels

of emotional involvement, novelty, and personal significance (deMatos et al., 2024). These experiences are distinct from routine leisure activities because they create memorable moments that tourists value and recall vividly (Hosany, Sthapit & Björk, 2022).

Flow is the central aspect of this framework, representing a deep state of focus and engagement in an activity. When tourists experience this immersion level, it enhances their memories' vividness. Being in a Flow state makes the experience more enjoyable and memorable. (Csikszentmihalyi, 1990; Kim et al, 2012). Novelty refers to the newness or uniqueness of an experience, which positively influences both the enjoyment and the ability to enter a Flow state (deMatos et al., 2024). Tourists are drawn to novel experiences, but novelty alone doesn't directly impact how well the experience is remembered unless it contributes to Flow (Tung & Ritchie, 2011; de Matos et al., 2024). Interpersonal interaction refers to social connections made during the experience, like meeting others or sharing the moment with companions (Liu et al., 2016). These interactions help foster Flow but don't directly influence memory. However, they contribute to deeper engagement in the experience (Kim, 2014; Cohen et al., 2014).

Satisfaction, a significant outcome of the framework, is influenced by both Flow and novelty. It isn't just about service quality but reflects tourists' emotional and psychological fulfillment. Higher levels result in more memorable experiences. Satisfaction also independently contributes to the creation of solid memories (Hosany et al., 2017; Prayag et al., 2017). Memories are the framework's outcome, encapsulating the essence of OLLE (Tung & Ritchie, 2011; Kim et al., 2012).

Figure 2.3 Proposed model of the OLLE



Source: deMatos et al. (2024)

For tourism professionals, (Figure 2.3) suggests that creating OLLE is not just about offering something new or facilitating social connections. It's about designing experiences that engage tourists profoundly and allow them to enter a Flow state (Csikszentmihalyi, 1990). This could involve creating immersive activities tailored to match tourists' skill levels and interests (Kim, 2014). Additionally, introducing elements of novelty that challenge or stimulate visitors can significantly enhance their engagement, as highlighted by Tung and Ritchie (2011). Furthermore, fostering environments where interpersonal interactions add value to the experience rather than detract from it can create a more enriching and memorable visit (Cohen et al., 2014).

2.4 The Role of Emotions in Tourism

Understanding MTEs requires understanding emotions, which are crucial to the customer journey. Emotions play a pivotal role in shaping tourists' perceptions, interactions, and memories of destinations (Hosany & Gilbert, 2010). Tourists' emotions significantly influence their cognitive assessments and subsequent behaviors. Research highlights the importance of positive emotional experiences across various tourism activities, including holiday destinations, cultural heritage visits, and adventure tourism. Scholars have explored different methods to assess tourists' emotions, such as self-reports, verbal and nonverbal communication, and qualitative approaches (Hosany & Gilbert, 2010). Additionally, studies emphasize that emotions play a central role in fostering place attachment and shaping tourists' satisfaction, which in turn impacts their likelihood to recommend destinations to others (Hosany et al., 2017). Unlike many other sectors (e.g., real estate industry) prioritizing functionality, tourism is primarily about crafting immersive emotional experiences (Cohen et al 2014). Tourists often forge strong emotional connections to destinations through sensory and experiential engagements, vital for enhancing satisfaction, loyalty, and decision-making (Hosany & Gilbert, 2010). Recognizing the need for emotionally engaging experiences can significantly boost a destination's appeal and promote repeat visitation (Cohen et al., 2014).

Contemporary tourism research increasingly emphasizes how emotional engagement contributes to developing MTEs—experiences that linger in a tourist's

memory (Hosany & Gilbert, 2010). Key emotional dimensions identified by Hosany and Gilbert (2010) include joy, love, and positive surprise, each playing a significant role in the memorability of travel experiences (Hosany & Gilbert, 2010).

Joy typically emerges from participating in enjoyable activities, whether hiking, engaging in cultural celebrations, or appreciating natural beauty (Csikszentmihalyi, 1990). For instance, national park visitors often feel joy while partaking in recreational activities or marveling at breathtaking landscapes (Korpela et al., 2010). Love is reflected in the emotional bonds tourists form with destinations, often fueled by personal experiences or the inherent beauty of the environment (Tung & Ritchie, 2011). Positive surprise occurs when a destination exceeds tourists' expectations, whether through encounters with extraordinary wildlife or discovering unexpected scenic spots. Such experiences can lead to deeper emotional engagement and lasting memories (Kim et al 2012).

Furthermore, experiences that evoke emotions such as awe and nostalgia play a crucial role in forming enduring memories (Baddeley, 1999). These emotions often drive tourists to revisit destinations and share their positive experiences with others (Tung & Ritchie, 2011).

2.5 The Role of Memory in Memorable Tourist Experiences

Memory plays a central role in shaping and preserving tourist experiences (Baddeley, 1999). According to Baddeley (1999), memory is a system that enables individuals to learn from past experiences and anticipate the future. In tourism, episodic memory is particularly significant because it captures personal trip moments. These memories gain meaning through reflection as tourists process their experiences and attribute personal significance to them (Schwartz, 2011). This reflective process influences loyalty and the likelihood of returning to a destination.

Tourist experiences can be understood through a comprehensive model of five phases proposed by Clawson and Knetsch (1966). These phases include anticipation, travel to the destination, on-site engagement, return travel, and recollection. Each phase contributes uniquely to the overall experience. Anticipation shapes expectations, while the travel phase can set the tone for the trip. On-site experiences are the most immersive,

involving interactions with the natural environment, local culture, and service providers (Clawson & Knetsch, 1966). The return journey provides a moment for reflection, and the recollection phase is where memories solidify and influence long-term impressions of the trip (Clawson & Knetsch, 1966).

Not all tourist experiences are equally memorable (Kim, 2014). Certain elements make some experiences stand out more vividly in memory. Kim (2014) identifies several factors that create MTEs. Hedonism, or the pleasure derived from the experience, is a primary factor. Tourists are more likely to remember moments of joy, relaxation, or excitement (Hosany et al., 2017). Novelty also plays a critical role, as unique and extraordinary experiences tend to stay in memory longer (Tung & Ritchie, 2011; Kim, 2014). Engaging with local culture through authentic interactions, traditions, or cuisine further enriches the tourist experience and fosters lasting memories (Kim, 2014). Additionally, the ability of tourism to provide mental and physical rejuvenation is a significant factor. Natural settings, in particular, allow tourists to escape daily stresses and find peace and renewal (Korpela et al., 2010; Hosany & Gilbert, 2010).

Other elements that enhance the memorability of tourism experiences include meaningfulness, active involvement, and knowledge acquisition (Kim, 2014). Meaningful experiences often involve personal reflection or emotional connections that resonate deeply with tourists (Tung & Ritchie, 2011). Active participation in activities fosters a sense of engagement, making the experience more impactful (Kim, 2014). Finally, learning something new about the destination's culture, history, or environment adds depth to the experience and strengthens its impression in memory (Kim, 2014).

Managing elements such as novelty, engagement, and cultural authenticity can help foster emotional connections and ensure visitors enjoy their trip and form vivid memories (Csikszentmihalyi, 1990; Tung & Ritchie, 2011). Based on Flow theory, these peak emotional and immersive experiences contribute to the satisfaction and memorability of a tourism experience (Csikszentmihalyi, 1990; de Matos et al., 2024).

For instance, deMatos et al. (2024) found that Flow (Figure 2.4) may be connected with the Escapism experience. Escapist activities, such as hiking, adventure sports, or exploring nature in Ile-Alatau, can immerse visitors so entirely that they lose track of time and place. Flow also plays a role in educational experiences. For example, interactive workshops or guided tours focusing on wildlife, botany, or geology can engage visitors

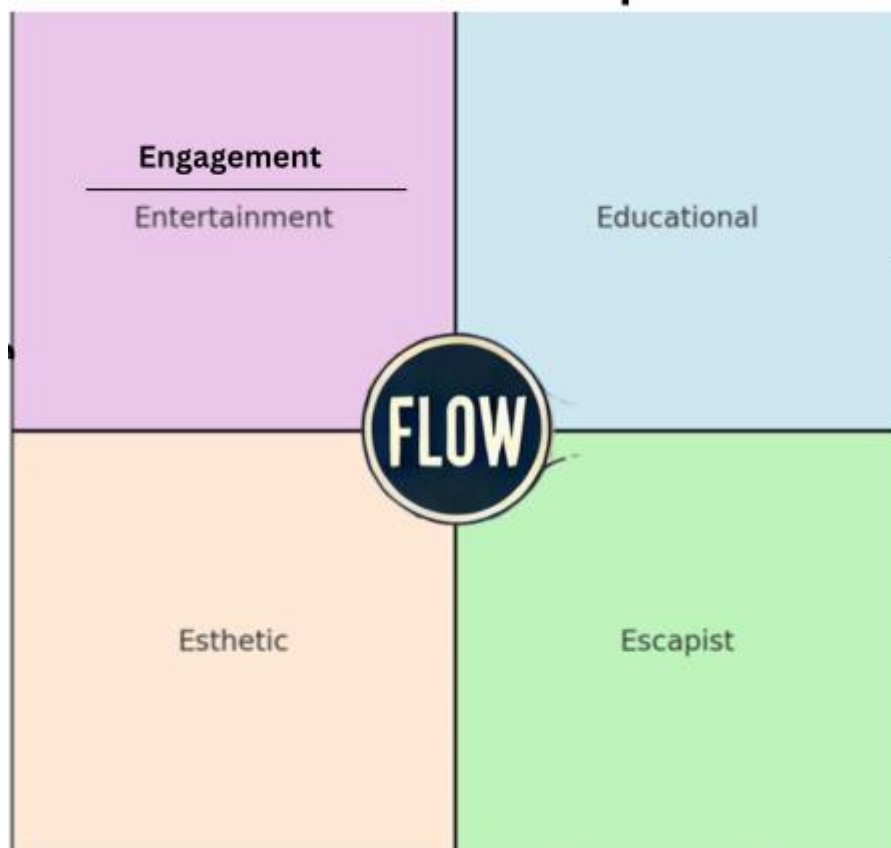
deeply and lead them into a Flow state (Csikszentmihalyi, 1990; Tung & Ritchie, 2011). Flow has been found to contribute to satisfaction and memories significantly (deMatos et al., 2024). To achieve Flow, activities must challenge and engage visitors, making engagement far more crucial than passive entertainment.

Engagement requires active participation and immersion rather than entertainment, it aligns with Flow theory, where guests are deeply involved in the experience (Csikszentmihalyi, 2013) through adventure activities, interactive learning, or hands-on involvement with nature (deMatos et al., 2024). This active participation fosters stronger emotional connections, satisfaction, and memorability (Tung & Ritchie, 2011; Hosany et al., 2017).

Novel entertainment, such as unique performances or cultural events, draws attention and piques curiosity. By presenting fresh and unfamiliar elements, novel engagement encourages active involvement (Tung & Ritchie, 2011; Kim et al., 2012).

Similarly, new natural sights, rare wildlife, or distinctive environmental features enhance the esthetic experience by introducing an element of surprise, which increases attentiveness. Novelty plays a particularly crucial role in educational tours and escapist activities. Learning new aspects of the ecosystem or discovering a previously unexplored hiking trail offers a fresh perspective (Tung & Ritchie, 2011; Kim, 2014).

Figure 2.4 Four realms of the experience and flow a proposal



Source: Adapted from deMatos et al. (2024)

Social interactions with guides, locals, or fellow tourists add a layer of personal connection to entertainment and educational experiences. Although interpersonal interaction alone does not significantly predict satisfaction or memory, it can enhance the depth and quality of the experience (de Matos et al., 2024).

Engagement strategies can leverage technologies like big data analytics, augmented reality (AR), and Virtual reality (VR) to personalize experiences (Kim & Kim, 2017; Mahat & Hanafiah, 2020). VR and AR technologies could be integrated into the educational framework to provide immersive experiences that bring biodiversity and history to life (Hosany et al., 2017; Colicev et al., 2019). Visitors can also explore different ecosystems, learn about endangered species, and gain insights into conservation efforts in a visually compelling way (Alaei et al, 2019).

2.6 User-Generated Content (UGC)

User-Generated Content (UGC) refers to various forms of media content—such as text, images, videos, and reviews—created and shared by individuals who are not acting in a professional capacity (Alaei et al, 2019). This content is typically disseminated through online platforms like social media, blogs, forums, and other digital channels. UGC has become a significant aspect of the digital landscape, especially with the rise of Web 2.0 technologies that facilitate user participation and content sharing (O’Hern & Kahle, 2013). In today's digital age, understanding and analyzing opinions expressed in UGC has become increasingly crucial across various domains. UGC is influential because it is perceived as more reliable and trustworthy than content shared by brands in traditional and online advertising (O’Hern & Kahle, 2013). This trust stems from the authenticity and firsthand nature of the experiences shared by other consumers (Alaei et al, 2019). This reliability and trustworthiness make UGC a powerful tool in influencing tourist decisions and perceptions, enhancing the overall effectiveness of tourism marketing efforts (O’Hern & Kahle, 2013).

UGC has become vital for promoting tourism destinations in the digital environment. Those who consistently provide MTEs are more likely to attract favorable reviews and greater engagement on social media platforms (Litvin et al., 2008; Prayag et al., 2017). Moreover, the emotional connections fostered by MTEs significantly shape how destinations are perceived and marketed in the competitive tourism landscape (Borrajo-Millán et al., 2021).

Gathering and analyzing feedback can help refine and enhance the experiences offered. Implementing sentiment analysis can provide valuable insights, ensuring the site’s offerings remain relevant and appealing (Alaei et al, 2019; Borrajo-Millán et al., 2021).

2.7 Sentiment Analysis

Sentiments refer to the underlying attitudes, feelings, or emotions expressed about a particular event, object, person, or situation in the context of experience and emotions. In research, sentiment analysis is critical for assessing subjective feelings or attitudes, typically from text data like reviews, surveys, or social media posts (Alaei et al 2019).

Sentiment analysis uses natural language processing (NLP) to assess emotional cues from UGC and categorize them into positive, negative, or neutral sentiments (Alaei et al 2019). Each aspect is assigned a sentiment score ranging from 1 (negative) to 5 (positive). Understanding sentiments involves recognizing the complexity of emotional expressions. Sentiments vary widely, from simple assessments of enjoyment or satisfaction to more intricate feelings such as nostalgia, disappointment, or frustration. For instance, a traveler may express gratitude for the beauty of a destination while simultaneously noting dissatisfaction with the service received. This duality emphasizes the need for nuanced analysis—consumers do not always reduce their experiences to a binary positive or negative classification. Instead, they articulate a spectrum of emotions that reflect their complex interactions with services and experiences. (Alaei et al., 2019).

Moreover, the advent of UGC on platforms has revolutionized how sentiments are mined and analyzed. Advanced sentiment analysis techniques can sift through this data, helping businesses, government agencies, and researchers tap into real-time sentiment trends, enabling them to respond and adapt to public feedback more efficiently.

2.8 Aspect-Based Sentiment Analysis (ABSA)

ABSA is a specialized branch of sentiment analysis that digs deeper than overall sentiment assessments. Instead of merely determining whether a review is positive or negative, ABSA focuses on extracting sentiments tied to specific aspects or features of a product or service. This is particularly critical in industries like tourism, where customer feedback often contains multiple facets, such as views on locality, ambiance, cleanliness, service quality, and facilities offered. Each aspect can generate distinct sentiments, thus providing a more granular understanding of user preferences and areas for improvement (Liu et al., 2021; Zhang et al., 2023).

ABSA is crucial because it translates complex customer feedback into actionable insights. For example, if numerous reviews indicate that guests are delighted with a park's scenic views but consistently dissatisfied with the staff, park management can prioritize staff training or operational refinements in that area while continuing to promote the appealing aspects of their service. This targeted approach allows businesses to enhance

customer satisfaction and loyalty by directly addressing pain points highlighted by tourists (Liu, 2015; Alaei et al., 2019).

Recent advancements in technology, especially with large language models (LLMs) like GPT-3.5 and GPT-4, have significantly improved the performance of ABSA. These models demonstrate remarkable capabilities in understanding context and nuances in natural language, thereby refining sentiment classification processes (Li et al., 2020). Compared to traditional models, LLMs can handle complex sentiment expressions more adeptly. This allows for better analyses in zero-shot or few-shot learning contexts with limited or no specific training data (Brown et al., 2020). This versatility means companies can leverage these models to analyze large datasets without extensive upfront investment in training materials.

Furthermore, practical prompt engineering and fine-tuning strategies are pivotal to enhancing LLM performance in ABSA. By formulating specific input prompts, researchers can guide the model's behavior toward desired outputs, especially in zero-shot scenarios where a precise understanding of context is essential. Conversely, fine-tuning a model on targeted datasets results in greater accuracy and performance metrics (Mao et al., 2022). For instance, when a model is trained explicitly on a dataset that includes detailed tourism reviews, it becomes better suited to classify sentiments about aspects like local cuisine, customer service, or environmental conditions effectively (Alaei et al., 2019; Borrajo-Millán et al., 2021).

ABSA bridges the gap between raw sentiment data and actionable business strategies. By focusing on specific parts of consumer feedback, ABSA allows tourism stakeholders and service providers to develop a nuanced understanding of customer expectations and experiences (Peng et al., 2020; Özen & Özgül Katlav, 2023). This understanding can help them tailor their offerings, refine operational areas, and ultimately provide enhanced satisfaction that resonates with travelers (Colicev et al., 2019; Mahat & Hanafiah, 2020). As sentiment analysis technologies continue to evolve, they promise to unlock even greater insights from the vast array of emotions expressed in UGC, representing a significant opportunity for innovation in the tourism sector (Alaei et al., 2019; Borrajo-Millán et al., 2021).

3. METHODOLOGY

3.1 Data design

The data design phase outlines the methodological approach taken for to identify the most frequently mentioned aspects of the Ile-Alatau National Park experience and evaluate how these can be optimized using the Experience Economy and OLLE frameworks. The research questions include: What are the key theoretical concepts and how do these visitor experiences are related to MTE's, emotions, and sentiments?

This stage sought to align the research objectives and the theoretical framework using the Experience Economy theory (Pine & Gilmore, 1999), flow (Csikszentmihalyi, 1990), emotions (Hosany & Gilbert, 2010), and memory (Baddeley, 1999) concepts. By applying these frameworks to the findings, the study will demonstrate how these concepts can be used by the natural park management. This framework will provide a structured approach to analyze and enhance in the future visitors' experiences, ensuring that the park offers a balanced mix of entertainment, education, escapism, and esthetics, while also creating flow, emotions and memories.

3.2 Data Collection

The data for this study was primarily collected from Google Maps Reviews, as this platform had the most substantial number of comments and reviews for Ile-Alatau National Park. Reviews from platforms such as TripAdvisor, 2GIS, and specialized travel forums were also considered to ensure a comprehensive dataset. This multi-platform approach aimed to gather a holistic view of feedback, encompassing various perspectives.

Visitors frequently use Google Maps to share their experiences, including detailed information about specific locations, aspects of the park, and personal observations. The large volume of reviews (5,911 analyzed in this study) made it possible to extract nuanced insights into various aspects of Ile-Alatau National Park.

The data was collected using the Google Maps Reviews Scraper tool from Apify. This tool facilitated the efficient extraction, ensuring a comprehensive collection of UGC.

Initially, 19,163 reviews were scraped. These reviews were then processed and analyzed using the AI Text Analyzer for Google Reviews, which left us with 5,911 (See Appendix A). The reduction from 19,163 to 5,911 reviews occurred due to filtering out irrelevant, duplicate, low-quality, or unprocessable content during data cleaning and analysis.

The peculiarity of this research is that the analysis of responses was not conducted based on pre-prepared questions but on reviews from Google, where people write freely about what truly affected their feelings, surprised, delighted, or disappointed them. Naturally, not everyone is ready to share their impressions in detail, and the most common responses are general (like "awesome," "great," or "terrible"), as reflected in the number of stars. From the detailed responses, we can see what pleases or disappoints people.

The reviews included multiple languages, reflecting the diverse group of international visitors. AI Text Analyzer for Google Reviews was used to convert non-English comments (Table 3.2). The tool provided efficiency, but specific challenges arose, such as maintaining contextual and emotional accuracy. Manual verification was done for select reviews to ensure that the translated text preserved the original sentiment.

Table 3.2 Example of Collected Data

Name	Text	Translated Text
Renuka Dhole	NaN	NaN
Mohammed Zuhail Rauf	Superb Place!!!	NaN
Aakshi Kapoor	Must visit places near Almaty	NaN
ELAMAN KHAN	На экопосту работают очень токсичные люди	Very toxic people work at the eco-post
Алина Белая	Как можно словами рассказать про величественны...	How can you describe majestic mountains in words?

3.3 Data Analysis

3.3.1 ABSA Process:

Aspect identification is a crucial stage that involves recognizing recurring themes visitors note. The reviews were analyzed utilizing web scraping tools and natural language processing (NLP) models.

A structured prompt (refer to Appendix B) was employed to identify critical aspects, involving a detailed examination to extract frequently mentioned themes.

Key Aspects Identified:

- **Scenery and Views:** Comments related to the park's landscapes, scenic views, and natural environment. Examples include "beautiful scenery," "stunning views," and "breathtaking nature."
- **Cleanliness:** Comments about cleanliness and maintenance, including litter and waste management, were common. Typical comments included "clean park," "well-maintained trails," and "litter-free areas."
- **Facilities:** Feedback on the availability and quality of facilities such as toilets, benches, and picnic areas. Examples are "modern restrooms," "ample picnic spots," and "well-placed benches."
- **Accessibility:** Observations regarding the ease of access and its attractions, including trails and paths. Comments included "easy to navigate trails," "wheelchair accessible," and "clear signage."
- **Staff/Service:** Reviews mentioning interactions with staff, including guides and service personnel. Examples are "friendly staff," "knowledgeable guides," and "excellent customer service."
- **Activities:** Comments on the availability and quality of recreational activities such as hiking, bird watching, and guided tours. Typical feedback included "great hiking trails," "excellent bird-watching spots," and "well-organized tours."

- **Accommodation:** Feedback on lodging options within or near the site, including campgrounds and hotels. Examples include "comfortable cabins," "well-maintained campgrounds," and "convenient hotel locations."

3.3.2 Sentiment Scoring

Table 3.3 Example of Aspect-Based Sentiment Scoring

Review	Scenery and Views	Cleanliness	Facilities	Accessibility	Staff/Service	Activities	Accommodation
1	[5]						
2	[5]						
3					[1]		
4	[5]						
5	[3]						
6	[5]		[3]				
7	[5]					[5]	

Each aspect was assigned a sentiment score ranging from 1 (negative) to 5 (positive). These scores were determined by analyzing the emotional tone associated with each aspect. The scoring was automated (Table 3.3.) using a zero-shot approach, providing uniform sentiment analysis across all reviews. For example, the natural reserve's beauty consistently scored high, reflecting tourists' appreciation for its landscapes, air quality, and serenity. In contrast, cleanliness and facilities were frequently mentioned as areas for improvement.

3.4 Data Processing and Aspect Extraction

Python libraries like Pandas were used to clean, organize, and manipulate the extracted data (Pandas Development Team, accessed 16 June 2024). Reviews with missing or irrelevant information (like blank comments) were removed. Sentiment analysis was then performed in batches using API calls to the GPT-4 model.

Application Programming Interface (API) Usage: An API is a set of protocols and tools that allow different software applications to communicate with each other, enabling

them to share data and functionality. In this case, the OpenAI API (OpenAI, accessed 16 June 2024) was executed to perform the analysis using the following steps:

- **Batch Processing:** Reviews were processed in batches to manage API rate limits.
- **Instructions Prompt:** Each batch was analyzed using specific instructions provided to the API, focusing on aspect identification, sentiment scoring, and cumulative analysis.
- **Aggregation:** The API responses were aggregated to compile a comprehensive analysis of the reviews (see Appendix C).

For Ile-Alatau National Park, ABSA enables a detailed analysis of specific strengths and weaknesses. For example, consistently low sentiment scores for 'cleanliness' indicate a need for better waste management practices. Conversely, high sentiment scores for 'Scenery and Views' highlight a significant strength that can be leveraged in marketing campaigns. This comprehensive analysis provides a clear picture of satisfaction and dissatisfaction, enabling targeted interventions (Mao et al., 2022).

3.4.1 Calculating Total Points for Each Aspect

Table 3.4 Sentiment Scores and Total Points for Key Aspects (100 Reviews)

Aspect	Sentiment Score	Number of Mentions	Total Points
Natural Beauty	5	44	220
Cleanliness	4, 3, 2, 1	8, 3, 4, 2	51
Facilities	4, 3, 2, 1	9, 3, 2, 1	50
Accessibility	4, 3, 2, 1	3, 2, 2, 1	23
Staff/Service	5, 1	4, 2	22
Activities	5	4	20
Accommodation	4	6	24

The (Table 3.4) summarizes the sentiment scores and total points for key aspects for the first batch of 100 reviews.

These broad categories provided a general framework for understanding the various feedback elements. However, as the analysis progressed, a more detailed examination revealed additional significant sub-aspects and themes. The study presented in Chapter 4.2 draws upon the 53 SWOT analysis conducted across various aspects of

feedback at Ile-Alatau National Park. This analysis was made in batches, with each batch contributing to the overall SWOT analysis. To create a single SWOT, all of the individual analyses from these batches were aggregated together (see Appendix D).

This more nuanced breakdown allowed us to identify critical areas that guests either praised or saw as needing improvement. For example, while 'Accessibility' was initially a general category, further analysis revealed specific issues related to transportation, parking, and road conditions. This level of granularity in the feedback enables management to implement precise, targeted improvements that address visitors' needs and preferences.

3.4.2 SWOT Analysis

After aggregating sentiment scores and identifying critical aspects, a SWOT analysis was conducted to evaluate experiences at Ile-Alatau National Park. This methodological approach provided a structured framework for understanding internal and external factors impacting performance.

The analysis was performed using sentiment data derived from feedback. Strengths and weaknesses were identified based on aspects with the highest and lowest sentiment scores, respectively. Opportunities were identified with a high rating and low number of occurrences and the lowest scores with potential areas for improvement were then determined as threats.

4. RESULTS AND DISCUSSION

4.1 Results

Following the structured methodology outlined in Chapter 3, ABSA's results revealed several key insights at Ile-Alatau National Park. The sentiment scores for each aspect were aggregated, revealing significant strengths and areas for improvement.

4.1.1 Extracted Data and Aspect Categorization

Table 4.1 Condensed Analysis - Key Aspects

Main Aspect	Total Score	Occurrences	Average Score
Scenery and Views	18928	3932	4.813835198
Overall Experience and Enjoyment	4697	1033	4.546950629
Cleanliness and Maintenance	3461	1021	3.389813908
Other	2178	466	4.673819742
Other	2178	466	4.673819742
Air Quality and Freshness	1044	210	4.971428571
Accessibility and Transportation	538	149	3.610738255
Facilities and Amenities	444	122	3.639344262
Family-Friendly Features	373	78	4.782051282
Infrastructure and Development	188	78	2.41025641
Peacefulness and Tranquility	345	70	4.928571429
Cost and Affordability	152	52	2.923076923
Staff and Service Quality	179	50	3.58
Seasonal Variation and Weather Sensitivity	188	46	4.086956522
Food and Dining Options	188	42	4.476190476
Natural Environment	196	41	4.780487805
Safety and Security	92	39	2.358974359
Crowd Management	85	31	2.741935484
Environmental Conservation	76	20	3.8
Cultural and Historical Significance	80	17	4.705882353

This table (Table 4.1) condenses 346 identified aspects, with each central aspect encompassing various sub-aspects contributing to a comprehensive understanding of the

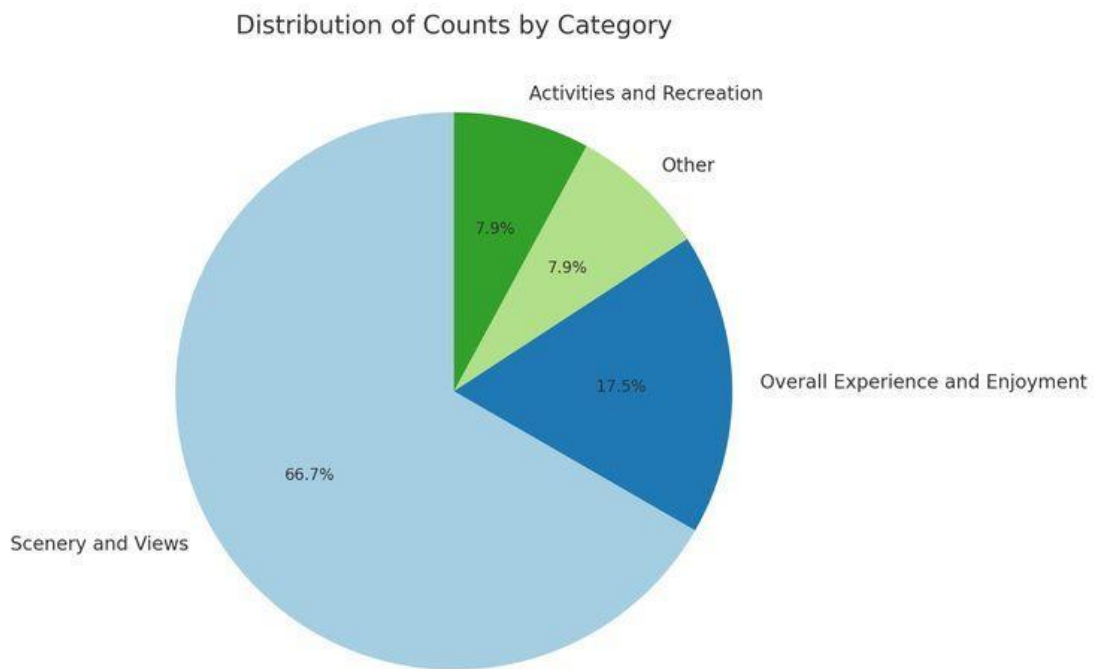
core theme (See Appendix E). To enhance clarity, sub-aspects thematically or categorically related to each central aspect are listed directly below their respective main aspect and are listed directly beneath them in the 4.2 SWOT section.

4.2 SWOT Analysis

Based on the results of this analysis and insights from existing research, these findings suggest several practical implications for future applications. Integrating these strategic considerations into corporate planning may support industry development and community engagement.

4.2.1 Strengths

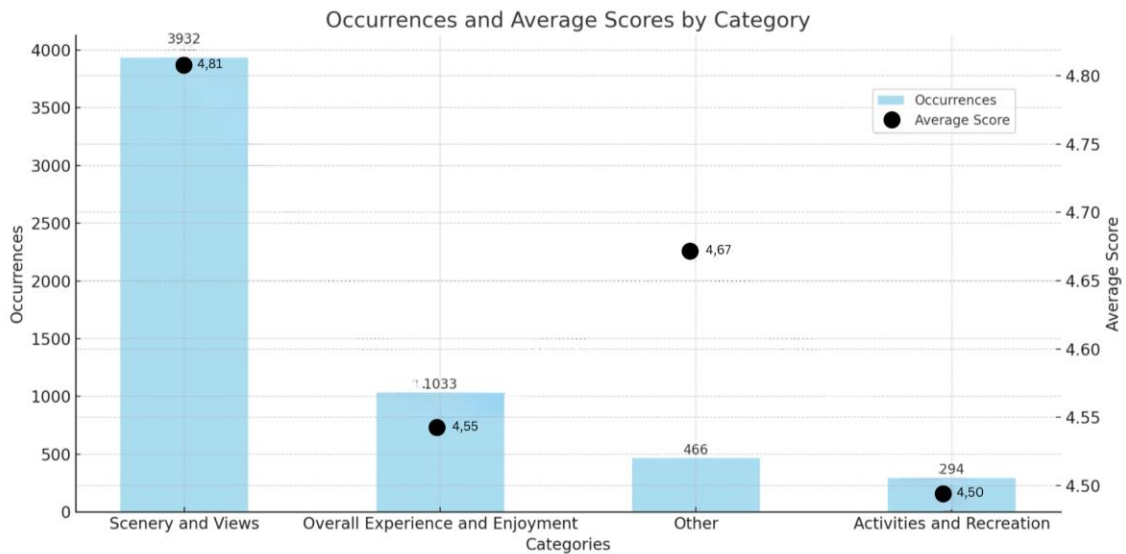
Figure 4.2 SWOT analysis, Strengths



The pie chart (Figure 4.2), titled "Distribution of Counts by Category," illustrates the breakdown of data into four distinct categories. The largest portion of the chart, representing 66.7%, is attributed to "Scenery and Views," making it the dominant category by a substantial margin. Following this, "Overall Experience and Enjoyment" accounts for 17.5% of the distribution, standing as the second most significant category.

The remaining two categories, "Activities and Recreation" and "Other," each contribute an equal share of 7.9% to the total. The chart clearly demonstrates that "Scenery and Views" holds a majority share, overshadowing the other categories combined and highlighting its central role in the distribution.

Figure 4.2.1 SWOT analysis, Strengths



The chart (Figure 4.2.1) illustrates the distribution of occurrences and average ratings across various categories, with blue bars representing the total occurrences and a black points indicating the average ratings.

The "Scenery and Views" category has the highest occurrences (3,932), highlighting its significant appeal. Despite its high frequency, it maintains an impressive average rating of 4.81, signaling high satisfaction.

Other categories, such as "Overall Experience and Enjoyment" and "Other," also exhibit a balanced combination of occurrences and average scores, reinforcing their dual significance. The last mentioned category, "Activities and Recreation," still holds a commendable rating of 4.50, indicating satisfaction despite its lower prominence.

4.2.1.1 Scenery and Views

Table 4.2 Scenery and Views

● Natural Beauty	● River	● Beautiful	● Aesthetic
● Scenery	● Unique	Place	● Cityscape
● Scenic Views	Features	● Nature	● Sightseeing
● Mountains	● View	Sounds	● Waterfalls
● Beauty	● City View	● Panoramic	● Landscapes
● Scenic View	● Mountain View	Views	● Vastness
● Waterfall	● Scenic Beauty	● Unique	● Scenic Spots
● Beautiful	● Great Nature	Nature	● Glacier
● Beautiful	● Seasonal	● Enchanting	● Scenic Route
Landscapes	Charm	Nature	● Jungle
● Lake	● Unique	● Seasonal	● Sky Views
● Impressive	Landscapes	Beauty	● National
Place	● Enchanting	● Breathtaking	Beauty
● Comparison to	● Autumn Charm	Views	
Switzerland	● Love for	● Inspiring	
● Mountain	Mountains	Nature	
Retreat	● Uniqueness	● Watercolor	

With 3932 mentions, Scenery and Views (Table 4.2) is the most positively perceived aspect of the park, receiving an average score of 4.81. Guests frequently describe its mountains, lakes, and waterfalls as “breathtaking,” “majestic,” and “serene.”

Creating a “scenic route map” that guides to panoramic viewpoints, lakes, and waterfalls could appeal to those interested in photography and nature observation. Management could enhance access to key scenic areas by developing sustainable trails and viewpoints. Designing nature trails with informational signage on local flora and unique plants would enhance the educational events for eco-tourists and families (Ballantyne et al., 2009; Leung et al., 2018). Constructing these trails with eco-friendly materials would preserve the natural environment while promoting accessibility for all (Leung et al., 2018).

The park could enrich scenic locations with educational signage or digital guides to foster a deeper connection between visitors and the landscape. For example, placing QR codes at iconic sites like lakes and waterfalls could link visitors to content about the history. Audio recordings, for instance, at Bukreev's Peak, featuring a similar to his voice to discuss the surroundings when placing the camera next to the QR code, would provide a more engaging experience (Kim & Kim, 2017; Mahat & Hanafiah, 2020).

Further amplifying the site's scenery, the UGC campaign could encourage sharing the site's beauty on social media. Rewards, such as free entry for top posts, would promote the park and build a community of advocates showcasing its stunning features (Colicev et al., 2019).

4.2.1.2 Overall Experience and Enjoyment

Table 4.3 Overall Experience and Enjoyment

● General	● Positive	● Best Place	● Emotions
● General	● Sentiment	● Inspiring	● Foreign
● Atmosphere	● Recommend	● Freedom	● Visitors
● Atmosphere	● ation	● Coolness	● Memorability
● General	● General	● Wonderful	● Mood
● Experience	● Enjoyment	● Cool Place	● Best Spot for
● Overall	● Best Place	● Classy	● Relaxation
● Relaxation	● for	● Atmosphere	● Revisit Value
● Experience	● Relaxation	● Unique	● Romantic
● Comfort	● Must Visit	● Experience	● Atmosphere
● Positive Vibes	● Local Charm	● Great Place	● Negative
● Enjoyment	● Relaxing	● Inspiration	● Experience
● Worthiness	● Memorable	● Impression	● Personal
● Disappointment	● Experience	● Disappointing	● Connection
● Wonder	● Tourist Spot	● Harmony	● Romantic
● Interesting	● Magic		● Tourism
● Place	● Must-See		

“Overall Experience and Enjoyment” of visitors was mentioned 1,033 times, with a high score of 4.55. This indicates that most visitors leave the park with a positive impression.

Feedback reflects positive overall experiences characterized by relaxation, memorable moments, and a deep appreciation for unique nature. This strong foundation presents valuable opportunities to position the natural reserve as a top destination for nature lovers seeking relaxation and inspiration (Tung & Ritchie, 2011; Hosany & Gilbert, 2010).

Using testimonials highlighting the park's uplifting and mood-enhancing environment in social media and marketing campaigns could attract individuals seeking mental and emotional rejuvenation. This approach could emphasize the park as a

sanctuary of well-being, appealing to those looking for an escape that nurtures the mind and spirit (Korpela et al., 2010; Hosany & Gilbert, 2010).

Emotion-tracking technologies, such as facial recognition and biometric sensors, would enable real-time assessment of emotional responses, allowing management to optimize activities that evoke positive emotions (Kement et al., 2024; Kim & Kim, 2017). Furthermore, AI-powered personalized recommendations could create unique itineraries, ensuring alignment with individual preferences (Gretzel & Yoo, 2008; Colicev et al., 2019).

Creating a platform to share visitors' adventures, such as a user-generated photo gallery or social media contests, could help build a robust community and inspire future visitors (Munar & Jacobsen, 2014). This approach would celebrate the site's natural charm and reinforce its reputation as a "must-visit" retreat for those seeking a memorable and vital connection to nature (Romero-Rodriguez & Castillo-Abdul, 2023; Colicev et al., 2019).

4.2.1.3 Other

Table 4.4 Other

- | | |
|------------------------------|-------------------------|
| • Overall Experience | • Food & Drinks |
| • Air Quality | • Crowd Management |
| • Unknown Aspect | • Escape from City Life |
| • Environmental Conservation | • Unknown |
| • Health Benefits | |

“Other” aspect (Table 4.4) received 466 mentions with an average score of 4.67, indicating that overall reviews were positive. A category labeled “Other” was created for the analysis, which consolidated generalized visitor feedback. These aspects represent themes with a more general nature or include elements from existing aspects. They may reflect overlapping areas and unique moments that are difficult to assign to specific main aspects. The creation of the “Other” category became a necessity to maintain analytical flexibility and account for all feedback.

While it would be possible to manually disaggregate these aspects and distribute them across the main categories, retaining the “Other” category is crucial for presenting a comprehensive picture of overall customer satisfaction with their visit to the park. This category can reflect cumulative impressions that go beyond specific themes, thereby indicating the overall emotional and cognitive evaluation left by visitors. Moreover, one of the aims of including this category was to identify any aspects that might not have been initially considered during the categorization process. Such an approach not only preserves the integrity of the analysis but also captures the nuances of visitor perceptions, which can be critically important for strategically managing the visitor experience.

4.2.1.4 Activities and Recreation

Table 4.5 Activities and Recreation

- | | | |
|----------------------------|-----------------------|----------------|
| • Activities | • Camping | • Picnicking |
| • Recreation | • Rock Climbing | • Ziplining |
| • Recreational Activities | • Birdwatching | • Swimming |
| • Recreation Opportunities | • Paragliding | • Snorkeling |
| • Hiking Trails | • Skiing | • Diving |
| • Walking Trails | • Boating | • Surfing |
| • Trekking | • Water Sports | • Windsurfing |
| • Biking Trails | • Guided Tours | • Snowboarding |
| • Adventure Activities | • Cultural Activities | • Scenic Drive |
| • Kayaking | • Fishing | • Playground |
| • Picnic Opportunities | • Horse Riding | • Photography |
| | • Nature Walks | • Golfing |
| | • Stargazing | • Snow Quality |
| | | • Observatory |

Activities and Recreation (Table 4.5) were mentioned 294 times, with an average score of 4.49. Visitors appreciate the variety of activities available.

The site could mark paths by difficulty level—“easy,” “moderate,” and “challenging”—and provide detailed maps and information boards at trailheads. Multi-use trails suitable for cycling, jogging, and walking could also be developed, featuring

designated shared-use markings to ensure safe interactions among visitors (Ballantyne et al., 2009; Deng et al., 2003).

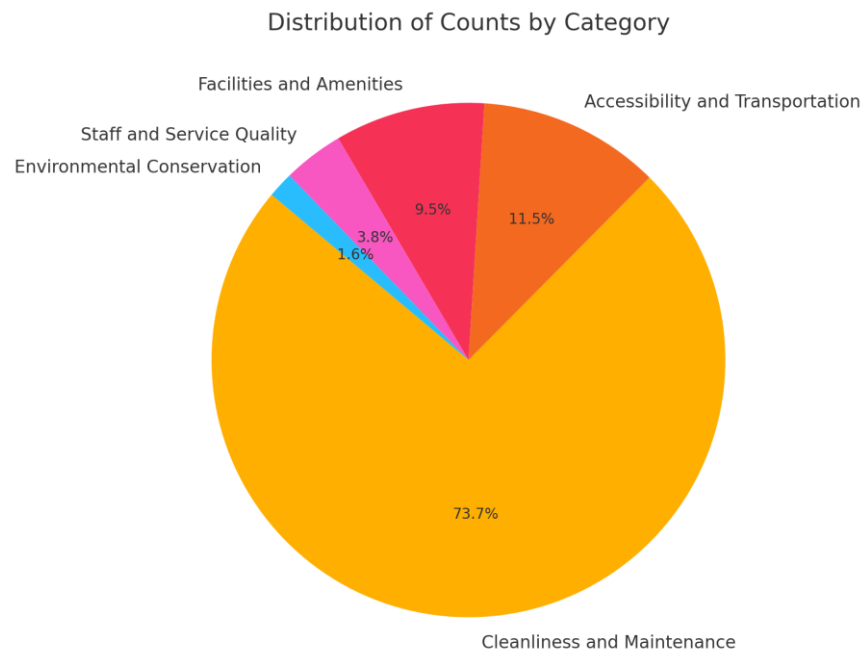
Themed guided hikes, such as sunrise or sunset walks, geology tours, and wildlife spotting excursions, would add variety and appeal to explorers with specific interests (Oh et al., 2007; Hosany et al., 2017).

The park could introduce various interactive and immersive activities to engage people of all ages. For instance, treasure hunts, nature photography contests, and guided adventure tours would provide dynamic, hands-on experiences. Additionally, expanding offerings with night-time activities, such as guided stargazing tours or bioluminescent night hikes, would allow visitors to explore the site in new and exciting ways, even after dark (Kim, 2014).

Offering boating and fishing rentals in designated zones and guided boat tours could cater to visitors while establishing scenic photography spots. These enhancements, along with clear guidelines for wildlife viewing and improved sightlines at observation points, would make the park a versatile and enriching destination for all types of nature enthusiasts (Leung et al., 2018).

4.2.2 Weaknesses

Figure 4.3 SWOT analysis, Weaknesses



The SWOT analysis identified critical weaknesses in “Cleanliness,” “Accessibility,” and “Facilities” as primary concerns for visitors at Ile-Alatau National Park. These issues are illustrated in (Figure 4.3), where a pie chart visually represents the proportion of complaints related to each category. The chart indicates that these three categories comprise the most significant feedback portions, suggesting they are the most frequently mentioned weaknesses.

4.2.2.1 Cleanliness and Maintenance

Table 4.6 Cleanliness and Maintenance

- Cleanliness
- Littering
- Maintenance
- Litter
- Condition
- Waste Management
- Maintenance Work

“Cleanliness” received 1,021 mentions and scored an average of 3.38 (Table 4.6). Although this score is not highly damaging, it reflects waste management and maintenance concerns. The park could improve its waste management strategy to enhance

cleanliness and visitor satisfaction by installing sensor-equipped bins in high-traffic areas, such as picnic spots, trailheads, and rest stops. These bins alert staff when complete, ensuring timely collection and reducing litter overflow (Vishnu et al., 2021).

The natural reserve could introduce a zero-waste initiative. Distributing reusable waste bags at the entrance and placing educational signage throughout the site would raise awareness about minimizing waste. Incentivizing participation with rewards, such as discounts on future visits, could encourage compliance (Ballantyne, Packer, and Hughes, 2009).

The park can ensure a consistently clean environment by streamlining these logistical elements, reinforcing its commitment to being a sustainable and welcoming destination for all (UNWTO, 2022).

4.2.2.2 Accessibility and Transportation

Table 4.7 Accessibility and Transportation

- | | |
|------------------|-----------------------------|
| • Accessibility | • Cable Car |
| • Traffic | • Proximity |
| • Convenience | • Distance from City Center |
| • Parking | • Convenient Location |
| • Location | • Distance from City |
| • Transportation | • Proximity to City |

“Accessibility and Transportation” (Table 4.7) received 149 mentions and an average score of 3.61, indicating areas for improvement. Issues related to transportation, parking, and road conditions are evident. Enhancing accessibility through better signage, improved roads, and potentially shuttle services would address visitor frustrations and open the park to a broader audience.

Concerns about road conditions leading to and within the park include safety issues, potholes, and uneven surfaces that can make travel challenging. Emergency call boxes or signs with emergency contact information could be placed along less accessible routes (Leung et al., 2018). During peak seasons, implementing a timed entry system would help control visitor numbers and reduce congestion, enabling the online reservation of slots and assisting management in maintaining smoother traffic flow (Ballantyne et al.,

2009). Designating certain roads as one-way routes or establishing vehicle loop trails could alleviate bottlenecks and minimize delays, creating more efficient visitor encounters. Designated parking areas for buses and larger vehicles would help clear high-traffic zones, ensuring regular parking remains accessible.

The park’s proximity to the city makes it an attractive weekend getaway for urban dwellers. However, providing more precise information on travel options and distances could improve the journey for first-time visitors (Mahrous & Hassan, 2016). Marketing materials could highlight the accessibility as a quick escape from the city. Additionally, an interactive online map that details recommended routes, nearby landmarks, and parking or shuttle options would aid navigation. Minor improvements, such as easy-to-read wayfinding signs at critical junctions, could reduce confusion. Providing live GPS-based navigation via a mobile app or digital guide, along with shuttle schedules and transportation updates at visitor centers, would help guests navigate the park efficiently and enjoyably (Mariani et al., 2016; Kim & Kim, 2017).

4.2.2.3 Facilities and Amenities

Table 4.8 Facilities and Amenities

- | | | |
|---------------------|------------------|-------------------|
| • Facilities | • Rental | • Lack of |
| • Picnic Facilities | Equipment | Facilities |
| • Accommodation | • Guide Services | • Barbecue |
| • Amenities | • Volunteer | Facilities |
| • Picnic Area | Involvement | • Cafe |
| • Information | • Hiking | • Camping |
| • Footwear | Equipment | Facilities |
| • Seating | • Park Size | • Local Vendors |
| • Picnic Areas | • Free Areas | • Restrooms |
| • Tour Services | • Riverbank | • Payment Options |
| • Rest Areas | Facilities | |
| • Shopping | | |

The park's “Facilities and Amenities” (Table 4.8) received 122 mentions and an average score of 3.63. Visitors appreciate the amenities' availability but highlight the need for improvements, particularly in restrooms, benches, and picnic spots.

Many expressed concerns regarding the inadequate number of restrooms and seating areas. Management could improve these conditions by prioritizing renovating and expanding restroom facilities, especially in remote or high-traffic areas. Upgrading these facilities to solar-powered units with water-efficient systems would reduce their environmental footprint (Ballantyne, Packer, and Hughes, 2009).

Improving camping facilities with traditional tent sites, “glamping” options, shaded picnic areas, and rest spots near scenic viewpoints and hiking trails would enhance comfort and encourage guests to stay longer and enjoy their surroundings (Ballantyne et al., 2009).

4.2.2.4 Staff and Service Quality

Table 4.9 Staff and Service Quality

- | | |
|-------------------|----------------------|
| • Service | • Quality |
| • Staff | • Restaurant Service |
| • People | • Services |
| • Service Quality | • Instructor |

“Staff and Service” (Table 4.9) received 50 mentions with a low average score of 3.58. This indicates mixed experiences, with some visitors praising helpfulness and others criticizing customer service. Improving staff training, particularly in hospitality and communication, could elevate this score and create a more welcoming environment for all visitors.

Establishing an anonymous feedback system through digital kiosks or online platforms will allow visitors to report positive experiences and areas for improvement, giving management real-time insights into staff performance (Mahrous & Hassan, 2016). During peak seasons, volunteer or internship programs can supplement staff efforts, ensuring visitors receive adequate attention and support even during the busiest periods (Mariani et al., 2016).

4.2.2.5 Environmental Conservation

Table 4.10 Environmental Conservation

- Environmental Preservation
- Human Impact
- Preservation
- Environmental Concerns
- Eco-Friendly
- Respect for Nature
- Environmental Protection
- Ecotourism
- Conservation

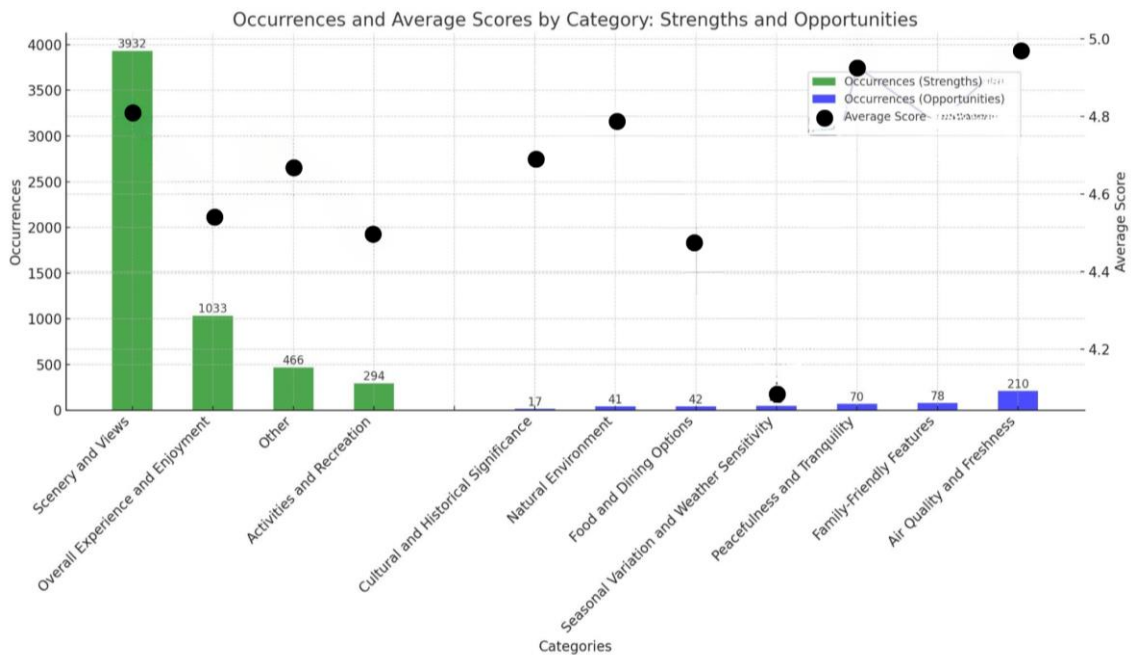
Although “Environmental Conservation” (Table 4.10) was mentioned only 20 times, it achieved an average score of 3.8. This suggests that while this aspect is appreciated, most visitors prioritize other factors. Promoting wildlife tours and conservation initiatives could enhance the prominence of this aspect in future feedback.

The park could benefit from offering additional wildlife observation areas and developing educational programs focused on its unique flora and fauna. Expert-led guided nature tours and citizen science initiatives, where tourists engage in activities like wildlife monitoring or plant identification, would deepen visitor engagement and foster a stronger connection to the park's ecosystems (Ballantyne et al. 2009).

Lastly, promoting conservation efforts for freshwater sources and natural landscapes can attract eco-conscious tourists and bolster the park's reputation for ecological stewardship. Highlighting these initiatives would position the park as a leader in preserving natural beauty and environmental integrity (González-Rodríguez et al., 2022; UNWTO, 2022).

4.2.3 Opportunities

Figure 4.4 SWOT analysis, Opportunities



In this context, opportunities are characterized by low occurrences but high ratings. These aspects, such as "Air Quality and Freshness" and "Cultural and Historical Significance," are less commonly mentioned but highly valued by those who notice them. Their strong ratings highlight their potential for further development and promotion, indicating areas where the park can create new value for visitors.

This dual analysis (Figure 4.4) reveals the park's current strengths, which define its reputation, alongside opportunities to enhance less visible yet impactful elements, ensuring a well-rounded and enriched visitor experience.

4.2.3.1 Cultural and Historical Significance

Table 4.11 Cultural and Historical Significance

- Cultural Experience
- Theme
- Local People
- Spirituality
- Historical Site
- Boldness
- Cultural Heritage
- Local Pride
- Craftsmanship

This aspect was mentioned 17 times, with an average score of 4.71, indicating that guests appreciate the cultural and historical factors (Table 4.11). Providing more information about history and cultural significance through signs, tours, or digital resources could enhance this experience, attracting those interested in heritage.

Installing interpretive signs near historically and culturally significant sites would be beneficial to educate visitors about the area's history and local traditions (Ballantyne et al., 2009; Jennings & Nickerson, 2006).

Promoting local vendors who sell handcrafted goods or traditional foods will support the local economy (Crompton, 1979; Munar & Jacobsen, 2014). Occasional cultural performances, such as conventional choir shows or craft fairs, could be organized to celebrate local heritage (Oh et al., 2007; Prayag et al., 2017).

4.2.3.2 Natural Environment

Table 4.12 Natural Environment

- Wildlife
- Water Quality
- Water Bodies
- Nature
- Water Springs
- Unique Plants
- Mountain Water
- Natural Wealth
- Proximity to Nature
- Escape from Heat
- Spring Water
- Warm Water
- Water
- Agriculture
- Sun
- Cool Temperature
- Altitude
- Rivers
- Sunshine
- Connection with Nature
- Love for Nature
- Flora
- Lake Condition
- Freshwater Source

The “Natural Environment” (Table 4.12) was mentioned 41 times and received an impressive average of 4.78. This score reflects visitors' admiration for the park’s preserved ecosystems, flora, and fauna. Emphasizing biodiversity in marketing materials could attract nature enthusiasts and eco-conscious visitors.

A “nature passport” program could encourage exploration and foster a deeper connection, allowing visitors to collect stamps at various natural landmarks, including scenic viewpoints, conservation zones, and essential features. This interactive experience would encourage visitors to discover all park areas, showcasing its diverse natural offerings (Ballantyne et al., 2009; Kim, 2014). Additionally, partnering with eco-tourism groups to host nature retreats could provide immersive experiences where visitors learn about sustainable practices, reinforcing the park’s commitment to environmental stewardship (Leung et al., 2018; UNWTO, 2022).

4.2.3.3 Food and Dining Options

Table 4.13 Food and Dining Options

- | | |
|----------------|-----------------|
| • Food | • Local Produce |
| • Food Quality | • Cuisine |
| • Food Options | • Taste |

“Food and Dining” received 42 mentions, with a solid average score of 4.48, indicating that visitors appreciate the available food options (Table 4.13). However, expanding the variety of dining choices, mainly local and eco-friendly ones, could create a more memorable culinary experience (Oh et al., 2007; Tung & Ritchie, 2011).

Farm-to-table dining options could significantly enhance visitor satisfaction by aligning with environmental and cultural values (Ballantyne et al., 2009; Han et al., 2018). By partnering with local farmers and food producers, the park could provide fresh, sustainable meals that improve food quality, support the local economy, and reduce its carbon footprint (Leung et al., 2018; Mahrous & Hassan, 2016).

4.2.3.4 Seasonal Variation and Weather Sensitivity

Table 4.14 Seasonal Variation and Weather Sensitivity

- Weather
- Seasonality
- Temperature
- Weather Sensitivity
- Cold
- Best Time to Visit
- Seasonal Variation
- Seasonal Experience
- Weather Variability
- Weather Conditions

“Seasonal Variation and Weather Sensitivity” received 188 mentions, with 46 explicitly related to weather and a favorable average score of 4.08. The park’s seasonal variation (Table 4.14) offers a unique appeal, showcasing distinct natural beauty throughout the year, from autumn’s vibrant foliage to winter’s snowy landscapes. The park could promote seasonal changes through designated photography spots highlighting seasonal views and social media campaigns featuring testimonials (Gretzel & Yoo, 2008; Mariani et al., 2016). Also, events like leaf festivals and flower walks should encourage repeat visits and attract various groups year-round (Oh et al., 2007; Kim, 2014).

Additionally, the park could improve visitor comfort by offering items such as rain gear or blankets during sudden weather changes in seasonal kiosks (Mahrous & Hassan, 2016). Moreover, an alert system through a mobile app could enhance safety by providing updates on extreme conditions (Kim & Kim, 2017). A comprehensive seasonal guide with tips on clothing, hydration, and seasonal highlights could assist visitors in planning effectively, ensuring they enjoy all the park offers throughout the year (Korpela et al., 2010; Hosany & Gilbert, 2010).

4.2.3.5 Peacefulness and Tranquility

Table 4.15 Peacefulness and Tranquility

- Tranquility
- Peacefulness
- Seclusion
- Quietness
- Relaxing Atmosphere
- Soulful Retreat
- Peaceful
- Peaceful Atmosphere

Both “Peace and Tranquility” are highly rated, with scores of 4.92 recorded 70 times. Visitors greatly appreciate the park's peaceful and serene environment (Table

4.15). Maintaining this tranquility, especially in more secluded areas, will ensure the park offers a relaxing experience.

To enhance its reputation as a peaceful and refreshing retreat, management could introduce designated quiet zones in secluded areas catering to couples, meditators, and those seeking a soulful escape. These zones would be marked on park maps, ensuring visitors can easily find peaceful areas away from more active spots, thereby preserving the tranquil ambiance that families and solo visitors value (Korpela et al., 2010; Hosany & Gilbert, 2010).

Emphasizing keywords like “peaceful,” “retreat,” and “soulful escape” in marketing materials would attract visitors looking for a refreshing experience. The park’s identity as a sanctuary from everyday stress could also be strengthened by hosting wellness-focused events such as yoga, meditation, and mindfulness walks (Leung et al., 2018).

4.2.3.6 Family-Friendly Features

Table 4.16 Family-Friendly Features

- | | |
|-------------------|----------------------|
| • Family Friendly | • Children-Friendly |
| • Family-Friendly | • Child Friendliness |
| • Child Friendly | • Child-Friendly |

Family and friends received 78 mentions and an average score of 4.78. The park could expand and diversify its recreational options to enhance satisfaction among families. Activities like interactive nature workshops, storytelling sessions, or hands-on craft demonstrations could make visits more engaging for children while providing educational value.

Additionally, cultural heritage tours emphasizing traditional practices, crafts, and stories could enrich the family experience. Such initiatives would enhance visitor enjoyment, promote cultural education, and support the local community's economy (Chirico et al., 2022).

4.2.3.7 Air Quality and Freshness

Table 4.17 Air Quality and Freshness

- Fresh Air
- Clean Air
- Freshness
- Mountain Air
- Scent

The park's Air Quality” received 1,044 mentions, with a favorable average score of 4.97. Visitors value the clean, fresh air, contributing to the natural retreat's reputation (Table 4.17). Marketing this aspect alongside other wellness-related activities could attract more health-conscious visitors.

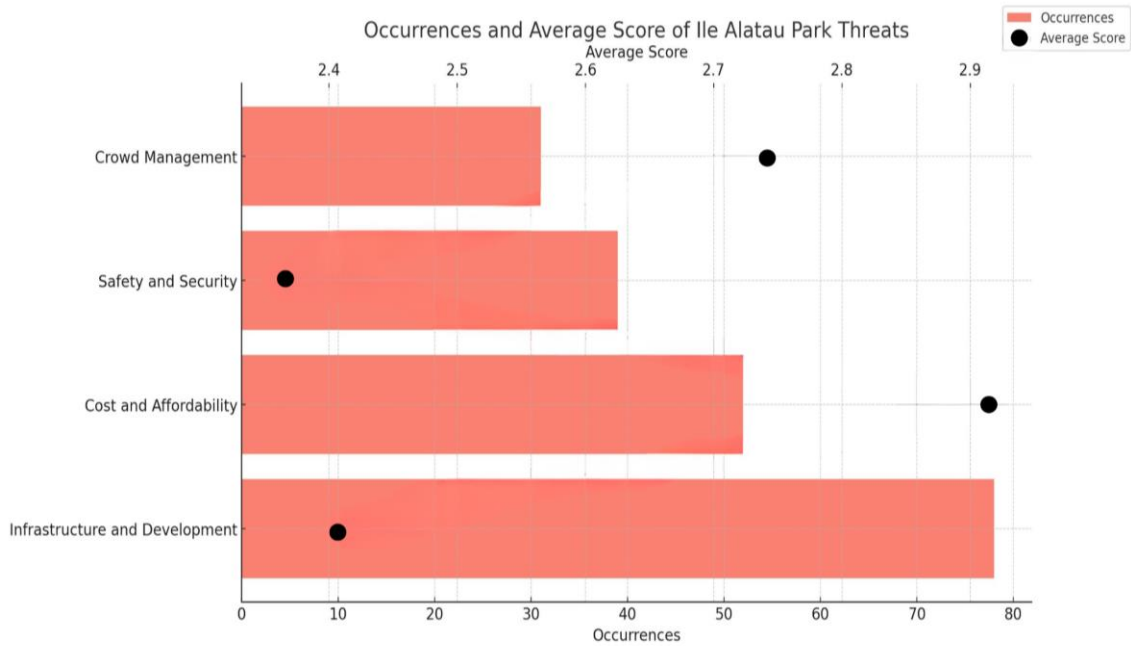
Promotional materials emphasizing the park’s "fresh, mountain air" and relaxed temperatures can draw visitors seeking a health-conscious retreat. By highlighting the pristine air quality and invigorating climate, the park can be an ideal escape for those looking to rejuvenate in a natural environment (Han et al., 2018; Korpela et al., 2010).

To further appeal to health-focused tourists, introducing wellness-centered options, such as designated meditation areas and guided breathing workshops, could enhance the park's reputation as a health-positive destination. These features would cater to individuals seeking a peaceful outdoor experience and underscore the commitment to supporting physical and mental well-being (Holbrook & Hirschman, 1982; Kim, 2014).

Additionally, installing real-time air quality monitors and displaying this information at the park entrance or on the website would attract urban guests looking for relief from city pollution (Leung et al., 2018).

4.2.4. Threats

Figure 4.5 SWOT analysis, Threats



This chart (Figure 4.5) displays the occurrences (as bars) and average scores (as points) for each threat category at Ile Alatau Park. It highlights the frequency of mentions and the satisfaction levels across various challenges, including infrastructure, cost, safety, and crowd management.

4.2.4.1 Infrastructure and Development

Table 4.18 Infrastructure and Development

- Roads
- Infrastructure
- Road Condition
- Administration
- Height
- Size
- Internet Connectivity
- Management
- Tourism Development
- Development
- Road Quality
- School
- Good Road Conditions
- Energy
- Construction
- Internet Signal
- Road Conditions
- Residency

With 78 mentions, the “Infrastructure and Development” aspect scored an average of 2.41, indicating notable dissatisfaction with the current state of infrastructure. Visitors likely feel that some park areas could benefit from improved pathways, signage, and other infrastructural upgrades (Table 4.18). Addressing these concerns through targeted development efforts can enhance accessibility and overall visitor satisfaction. Road conditions, parking, and maintenance issues highlight the need for targeted improvements.

Implementing eco-friendly infrastructure improvements, such as biophilic lodges and green visit centers, could provide dual benefits by promoting sustainability while meeting infrastructure needs. Incorporating sustainable materials, renewable energy sources, and low-impact construction techniques would align with the eco-tourism goals, potentially transforming these upgrades into attractive features for visitors (Leung et al., 2018).

4.2.4.2 Cost and Affordability

Table 4.19 Cost and Affordability

- | | |
|-----------------|----------------|
| • Cost | • Pricing |
| • Affordability | • Staff Salary |
| • Entrance Fee | • Expensive |
| • Price | • Food Pricing |

“Cost and Affordability” were noted in 52 mentions, with an average score of 2.92. This reflects a degree of dissatisfaction with the perceived cost of visiting the park relative to the services and facilities provided (Table 4.19). Implementing transparent pricing models and enhancing amenities may assist in justifying expenses and improving visitors' perceptions of value.

Some visitors suggested that heightened commercialization, particularly in retail outlets and advertising, diminished the natural beauty. Management should consider restricting commercial activities to the park's most scenic locations to maintain an untouched atmosphere that appeals to eco-tourists and nature enthusiasts (Leung et al., 2018; Deng et al., 2003). The site could preserve its core eco-friendly values by

minimizing the visible presence of shops and commercial ventures in natural areas (Hosany et al., 2017; Mahrous & Hassan, 2016).

While a certain level of commercialization may be necessary to provide essential services and generate revenue, it is crucial to avoid over-commercialization, as it could compromise the park's natural and cultural allure (Kim, 2014; Leung et al., 2018). Striking a balance between commercialization and preserving the park's ecological integrity is vital. If not managed judiciously, increased commercial activities could dilute the park's authenticity and deter eco-conscious visitors who seek a more natural and unspoiled experience (Borrajo-Millán et al., 2021).

4.2.4.3 Safety and Security

Table 4.20 Safety and Security

- | | |
|---------------|----------------------|
| • Safety | • Enforcement |
| • Security | • Rules Adherence |
| • Fire Safety | • Road Safety |
| • Warning | • Illegal Activities |
| • Corruption | • Restricted Access |

These categories received 39 mentions regarding “Safety and Security,” resulting in an average score of 2.35.

The park could enhance safety initiatives by increasing the availability of clear signage, emergency call stations, and safety patrols, particularly in remote or high-risk areas (Table 4.20). Such improvements would ensure visitors have immediate access to assistance and critical information, reinforcing their sense of safety within the park (Majeed et al., 2020).

Additionally, providing safety workshops or educational materials focusing on wilderness safety and emergency protocols could foster responsible visitor behavior. Improving maps and supplying detailed information on trail difficulty and potential hazards would empower guests to make informed decisions, thereby mitigating risks and enhancing overall safety and confidence (Majeed et al., 2020).

4.2.4.4 Crowd Management

Table 4.21 Crowd Management

- | | |
|---------------|--------------|
| • Crowdedness | • Crowded |
| • Crowds | • Crowd |
| • Crowd Level | • Popularity |

“Crowd Management” was mentioned 31 times, with a low average score of 2.74, indicating that overcrowding detracts from the park experience. Reflecting concerns about how the site handles large groups and peak season (Table 4.21). Better flow management could mitigate the negative impact of overcrowding on the park's peaceful atmosphere (Hosany et al., 2017).

Overcrowding leads to congestion in popular areas, detracting from the natural reserve's peaceful ambiance (Leung et al., 2018; Prayag et al., 2017). Marketing campaigns should emphasize the benefits of off-peak visits, such as better wildlife viewing opportunities and a more tranquil experience.

Expanding facilities like seating, picnic tables, and shelters would provide additional capacity in high-traffic areas (Ballantyne et al. 2009).

4.3 Discussion

The findings provide valuable insights into visitors' most memorable experiences, emotions, and sentiments at Ile-Alatau National Park, offering practical recommendations for enhancing these aspects. By integrating Flow within the 4E Framework, park management can develop a targeted approach to deepen experiences across various dimensions.

The park's landscapes are a primary strength, aligning with the Esthetic and Escapism dimensions. Enhancements such as eco-friendly pathways, sensory-rich elements, and clear signage along scenic trails can help visitors fully immerse themselves in the beauty of nature. This immersion facilitates a Flow experience where individuals become visually engaged and emotionally connected to their surroundings. This is

congruent with deMatos et al. (2024) view that engaging tourism experiences contribute to tourists' achieving the state of flow.

Introducing seasonal guided photography tours and dynamic signage highlighting local flora, fauna, and geological features can add a touch of Novelty, encouraging repeat visits and ensuring each experience remains fresh (Kim, 2017). Additionally, implementing QR codes and AR capabilities allows visitors to engage with the park virtually, making educational aspects more personal and interactive (Litvin et al, 2008).

Creating designated wellness zones within the park can foster relaxation and mental rejuvenation, adhering to Esthetic and Entertainment dimensions. These serene areas, enhanced by natural sounds and aromatic plants, become tranquil retreats for guests seeking mental calmness (Hosany & Gilbert, 2010). The park can improve visitor engagement and transform into a true wellness sanctuary by offering innovative wellness programs like meditation and breathing workshops (Chirico et al., 2022). Furthermore, group wellness activities like eco-tourism workshops and guided nature walks promote social bonding, creating opportunities for meaningful connections among visitors while connecting with nature (Ballantyne et al, 2009).

Pristine air quality offers a unique opportunity for immersive health-centered experiences, bridging the realms of Esthetics and Education (Borrajó-Millán et al., 2021). Organized activities such as guided breathing exercises and yoga sessions capitalize on the fresh air, helping participants achieve Flow states centered on wellness (Csikszentmihalyi, 1990). By marketing the health benefits associated with its clean air, the park can attract health-conscious visitors and introduce Novelty through specialized health-focused programming (deMatos, 2024). Wellness retreats led by experienced guides can enhance Interpersonal Interaction and contribute to shared learning experiences, enriching the educational value offered by these activities and fostering an environment conducive to holistic health (Chirico et al., 2022).

Interactive family trails and heritage tours cater to the Entertainment and Education dimensions by connecting visitors with the park's cultural history. Programs focused on local culture, such as traditional crafts workshops and indigenous storytelling sessions, provide Novelty and create memorable experiences for families (Lopes et al., 2023). These initiatives foster Flow through active learning, allowing families to bond and grow in an engaging environment (Csikszentmihalyi, 1990). Storytelling with local

guides deepens Interpersonal Interaction, linking families to community traditions and enhancing their connection to local culture (Hosany & Gilbert, 2010).

Educational initiatives like a "nature passport" program, which allows visitors to collect stamps from various landmarks, create a Flow state that encourages exploration and discovery (Csikszentmihalyi, 1990). This initiative supports Esthetic and Educational dimensions, emphasizing the park's dedication to environmental stewardship (Borrajó-Millán et al., 2021). Conservation-focused activities, such as wildlife monitoring and plant identification challenges, introduce Novelty by engaging visitors in hands-on learning (Ballantyne et al, 2009). Expert-led nature tours enhance Interpersonal Interaction, fostering personal connections between guests and the park's conservation efforts. This approach not only cultivates a sense of environmental responsibility but also encourages repeat visits by connecting visitors with the park's conservation mission (Vishnu et al., 2021).

Maintaining the park's cleanliness is essential to preserving its Esthetic appeal and supporting a seamless Flow experience (Alaei, 2019). Ensuring cleanliness continuity requires a more proactive approach, especially with growing visitor numbers (Borrajó-Millán et al., 2021). Introducing intelligent waste bins with sensors and implementing zero-waste initiatives like reusable waste bags can address cleanliness challenges while adding Novelty to conservation efforts (Liu, 2012). Educating visitors through conservation signage and brief interactions with guides encourages a sense of environmental responsibility, enhancing the Educational dimension (Ballantyne, 2009). Proactive waste management and maintenance are crucial for maintaining the appeal and preserving satisfaction (Vishnu et al., 2021).

Accessibility and sustainable transportation options represent both a weakness and an opportunity. Ensuring smooth navigation through improved road conditions and real-time GPS reduces frustration, supporting an uninterrupted Flow experience in line with Escapism and Entertainment dimensions (Liu, 2012). Novel transportation options like eco-friendly shuttles and scenic bike trails appeal to environmentally conscious visitors, enhancing the park's green reputation (Kim, 2017). Guided shuttles with educational narration add an Interpersonal Interaction element, transforming transportation into an engaging journey rather than a mere transit experience. Effective implementation of these options can help reduce environmental impact and encourage

diverse exploration modes that align with the park's eco-friendly values (Borrajo-Millán et al., 2021).

With increasing popularity, crowd management and safety present notable threats. Clear safety signage, emergency stations, and well-maintained trails ensure guests feel secure, enabling them to focus on Esthetic and Escapism experiences (Alaei, 2019). The park can add Novelty to safety education by introducing seasonal safety workshops, making it more engaging and informative (Lopes et al., 2023). Managing crowd flow through timed entries, and incentivizing off-peak visits helps alleviate congestion (Vishnu et al., 2021). At the same time, ambassadors or volunteers can assist with crowd control, enhancing Interpersonal Interaction and creating a welcoming atmosphere (Ballantyne, 2009). Ensuring safety and comfort in crowded spaces preserves the park's serene appeal and enhances visitor loyalty (Kim, 2017).

The OLLE Framework, focusing on creating peak emotional moments, adds a valuable perspective by emphasizing experiences that evoke awe and joy (Chirico et al., 2022). Memorable events—such as rare wildlife sightings, seasonal changes, and cultural celebrations—offer profound moments that align with Esthetic and Escapism dimensions (deMatos, 2024). By curating such high-impact experiences, the park fosters emotional attachment and loyalty, as visitors are more likely to share these experiences with others, enhancing the park's visibility and reputation (Borrajo-Millán et al., 2021). This focus on peak moments enriches visitor engagement and strengthens the park's position as a destination for nature-based, emotionally resonant experiences.

5. CONCLUSION

The primary goal of this research was to understand visitor experiences at Ile-Alatau National Park by applying Aspect-Based Sentiment Analysis (ABSA) to online reviews. However, the focus extends beyond the method itself to the interpretation of the results, providing actionable insights into how park experiences shape visitor emotions, foster Flow states, and create lasting memories. These findings guide meaningful recommendations to enhance visitor engagement and satisfaction while supporting sustainable park management practices.

The research identifies vital satisfaction aspects by analyzing online reviews, revealing strengths and areas needing improvement. These aspects enhance the park's appeal, essential for tourists' satisfaction and long-lasting memories that encourage them to share and return.

The application of ABSA, using a large language model as a core engine in this research demonstrates its potential to provide nuanced insights into sentiment that traditional methods might overlook. Park management can develop more effective strategies to address positive and negative feedback by focusing on specific aspects. SWOT analysis allows for a more granular understanding of needs and preferences, enabling the implementation of data-driven decisions that enhance the overall quality of tourism services.

Optimizing and building upon the existing attractions using the Experience Economy framework is crucial. Each realm contributes uniquely to overall memories by offering different types of engagement. Understanding and utilizing these realms, emotions, sentiments, can help create a balanced and immersive environment that captivates, educates, and engages in meaningful and memorable ways.

The analysis concludes that the emotional experiences at Ile-Alatau National Park are shaped by moments of deep engagement, discovery, and connection. These experiences resonate through the creation of Flow states, leaving visitors with lasting memories. To sustain and enhance this impact, park management must prioritize immersive, novel, and socially enriching experiences.

Moreover, the study's findings have broader implications for tourism management, particularly in the context of natural parks. Sentiment analysis as a tool for interpreting feedback can be instrumental in developing responsive management strategies. By systematically analyzing and addressing concerns, management can contribute to its long-term sustainability while ensuring that it remains an attractive destination for future visitors.

5.1 Limitations

5.1.1 Challenges

Some key challenges in this process included managing large datasets, ensuring the accuracy of sentiment interpretation (especially in translated reviews), and addressing polarized feedback (extraordinarily positive or negative reviews). Tools like GPT-4 provided significant benefits in handling this, but sentiment nuances in mixed or neutral reviews remained a limitation.

While tools like GPT-4 have significantly streamlined the process of sentiment analysis and handling large datasets, they have limitations. One key issue is that AI models, including GPT-4o, can occasionally produce inaccurate or fabricated information, a phenomenon known as "hallucination." These hallucinations occur when the model generates content that may seem plausible but is factually incorrect or lacks a basis in reality. Compounding this challenge, the model must explicitly indicate when it needs to gain knowledge on a given topic, making it difficult for users to discern when information is inaccurate. Therefore, it is crucial to verify essential details manually, as errors may go unnoticed, especially in complex or highly nuanced scenarios.

During the data analysis phase, to manage API rate limits, we processed a maximum of 5,000 reviews from the initial dataset of 5,911 reviews (See Appendix D). This script utilizes batch processing to efficiently manage and analyze many reviews. By breaking down the reviews into smaller batches of 100, the code ensures that the processing remains manageable and adheres to API rate limits. Each batch of reviews is formatted and then sent to the GPT-4 model for sentiment analysis through an API call. After conducting the study using the batch processing script, the results comprehensively understand sentiments toward various aspects of Ile-Alatau National Park.

5.1.2 Bias in Online Reviews

This study has several limitations that must be considered when interpreting the findings. One of the primary limitations is the potential bias inherent in online reviews. The data used for sentiment analysis primarily originates from online platforms where users voluntarily leave feedback. This self-selection bias often leads to overrepresenting

individuals with highly positive or negative experiences, distorting the overall sentiment analysis. As a result, the views reflected in these reviews may be representative of the broader population, with more moderate or neutral opinions potentially underrepresented. According to research by Litvin et al. (2008), online reviews tend to attract polarized opinions, further impacting the reliability of the collected data. Future studies should explore methods to mitigate this bias, such as incorporating a broader range of review platforms or supplementing the analysis with direct surveys to ensure a more balanced representation of sentiment.

Another limitation pertains to the linguistic and cultural contexts of the reviews analyzed. The study included reviews written in multiple languages, which were translated into English using automated translation tools. In some cases, subtle variations in meaning and tone may have been overlooked during translation. As a result, specific cultural nuances and sentiment expressions may have been lost or misinterpreted, potentially introducing inaccuracies in the sentiment scores attributed to particular aspects. The potential for cultural and linguistic biases in sentiment analysis underscores the importance of developing more culturally sensitive approaches to analyzing multilingual data in future studies.

Lastly, the scope of the data sources used for sentiment analysis presents another limitation. The study relied on reviews from a limited number of online platforms, which may not capture the full diversity. Different platforms attract different demographics, so the findings may be more reflective of the user base of those specific platforms than the general population. Expanding the range of data sources to include a broader array of review platforms or incorporating additional data collection methods, such as direct surveys, could provide a more comprehensive and balanced view of satisfaction.

5.2 Future research

Building on this study's findings, several avenues for future research emerge that could further enhance our understanding and sentiment in natural parks like Ile-Alatau. First, conducting longitudinal studies could be instrumental in tracking changes in sentiment over extended periods. Researchers can gain deeper insights into these strategies' effectiveness and long-term impact by examining how sentiments evolve, particularly in response to specific management interventions or seasonal changes. This

approach would allow a more dynamic understanding of satisfaction and its influencing factors.

Another promising area for future research is the comparative analysis of sentiments across different seasons or events. This could help identify seasonal variations, often overlooked in single-timeframe studies. By comparing data across various times of the year or during special events, researchers can uncover patterns that inform more targeted and effective management practices tailored to each season's unique demands.

In addition to these temporal analyses, there is a growing potential for leveraging advanced AI tools to analyze photos and videos visitors share. Visual content analysis could complement text-based sentiment analysis, providing a more prosperous, multi-dimensional understanding. For instance, machine learning algorithms could be employed to detect emotions or themes in images and videos, offering insights into the aspects of the park that are visually most impactful to visitors. This could be particularly useful for enhancing marketing strategies and improving engagement through visually appealing content. Also, using other LLM's (for example Claude 3.5 and Gemini 2) could also improve analysis.

BIBLIOGRAPHY

Alaei, A. R., Becken, S., & Stantic, B. (2019). Sentiment analysis in tourism: Capitalizing on big data. *Journal of Travel Research*, 58(2), 175-191. <https://doi.org/10.1177/0047287517747753>

Baddeley, A. D., & Logie, R. H. (1999). Working memory: The multiple-component model. In A. Miyake & P. Shah (Eds.), *Models of working memory: Mechanisms of active maintenance and executive control* (pp. 28–61). Cambridge University Press. <https://doi.org/10.1017/CBO9781139174909.005>

Ballantyne, R., Packer, J. & Hughes, K. (2009). Tourists' support for conservation messages and sustainable management practices in wildlife tourism experiences. *Tourism Management*, 30(5), pp. 658-664. <https://doi.org/10.1016/j.tourman.2008.11.003>

Borrajo-Millán, F., Alonso-Almeida, M.-d.-M., Escat-Cortes, M., & Yi, L. (2021). Sentiment analysis to measure quality and build sustainability in tourism destinations. *Sustainability*, 13(11), 6015. <https://doi.org/10.3390/su13116015>

- Brown, T.B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., Neelakantan, A., Shyam, P., Sastry, G., Askell, A., & Agarwal, S. (2020). Language models are few-shot learners. *Advances in Neural Information Processing Systems*, 33, pp. 1877-1901. <https://arxiv.org/abs/2005.14165>
- Chirico, A., Pizzolante, M., Kitson, A., Gianotti, E., & Gaggioli, A. (2022). Defining transformative experiences: A conceptual analysis. *Frontiers in Psychology*, 13, p.790300. <https://doi.org/10.3389/fpsyg.2022.790300>
- Cohen, S.A., Prayag, G. and Moital, M. (2014). Consumer behavior in tourism: Concepts, influences, and opportunities. *Current Issues in Tourism*, 17(10), pp. 872-909. <https://doi.org/10.1080/13683500.2013.850064>
- Colicev, A., Kumar, A. and O'Connor, P. (2019). Modeling the relationship between firm and user-generated content and the stages of the marketing funnel. *International Journal of Research in Marketing*, 36(1), pp.100-116. <https://doi.org/10.1016/j.ijresmar.2018.09.005>
- Clawson, M. and Knetsch, J.L., 1966. *Economics of Outdoor Recreation*. Baltimore: Johns Hopkins Press. pp. 34-35
- Crompton, J.L. (1979). Motivations for pleasure vacation. *Annals of Tourism Research*, 6(4), pp. 408-424. [https://doi.org/10.1016/0160-7383\(79\)90004-5](https://doi.org/10.1016/0160-7383(79)90004-5)
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper & Row.
- Csikszentmihalyi, M. (2013). *Flow: The psychology of happiness*. London: Random House.
- Deese, R. and Power, C. (2006). *The Customer Experience: Driving Loyalty Through Innovation*. Hoboken, NJ: Wiley.
- deMatos, N. M. D. S., Duarte, P. A. D. O. and Sá, E. S. D. (2024). Once-in-a-lifetime leisure experiences (OLLE): the role of flow, novelty, and interpersonal interaction on tourists' satisfaction and memories. *Journal of Vacation Marketing*. <https://doi.org/10.1177/13567667231157012>.
- deMatos, N.M., de Oliveira Duarte, P.A. and de Sá, E.S. (2022). Flow experience and emotions in tourism', in Agapito, D., Ribeiro, M.A. and Woosnam, K.M. (Eds.) *Handbook on the tourist experience: Design, marketing and management*. Cheltenham: Edward Elgar Publishing, pp. 61-72.
- Deng, J., Qiang, S., Walker, G.J. and Zhang, Y. (2003). Assessment on and perception of visitors' environmental impacts of nature tourism: A case study of Zhangjiajie National Forest Park, China. *Journal of Sustainable Tourism*, 11(6), pp. 529-548. <https://doi.org/10.1080/09669580308667217>
- Ford, R.C. and Heaton, C.P. (2000). *Managing the Guest Experience in Hospitality*. Albany, NY: Delmar.

- Garrod, B. and Dowell, D., 2020. Experiential marketing of an underground tourist attraction. *Tourism and Hospitality*, 1(1), pp.1-19. <https://doi.org/10.3390/tourhosp1010001>
- González-Rodríguez, M.R., Díaz-Fernández, M.C., Bilgihan, A., & Shi, F. (2022). The impact of eWOM source credibility on destination visit intention and online involvement: A case of Chinese tourists. *Journal of Hospitality and Tourism Technology*, 13(5), pp. 855-874. <https://doi.org/10.1108/JHTT-11-2021-0321>
- Gretzel, U. and Yoo, K.H. (2008). Use and impact of online travel reviews. In: P. O'Connor, W. Höpken and U. Gretzel, eds. *Information and Communication Technologies in Tourism 2008*. Vienna: Springer, pp.35-46. https://doi.org/10.1007/978-3-211-77280-5_4
- Guerreiro, M., Pinto, P., Bagheri, F., & deMatos, N. (2025). Broadening tourism experience and destination image: A cross-cultural approach between international and domestic tourists. *European Journal of Tourism Research*, 39, 3909-3909.
- Han, H., Kiatkawsin, K., Jung, H., & Kim, W., 2018. The role of wellness spa tourism performance in building destination loyalty: The case of Thailand. *Journal of Travel & Tourism Marketing*, 35(5), pp.595–610. <https://doi.org/10.1080/10548408.2017.1376031>
- Holbrook, M.B. and Hirschman, E.C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of Consumer Research*, 9(2), pp.132-140. <https://doi.org/10.1086/208906>
- Hosany, S. and Gilbert, D. (2010). Measuring tourists' emotional experiences toward hedonic holiday destinations. *Journal of Travel Research*, 49(4), pp. 513-526. <https://doi.org/10.1177/0047287509349267>
- Hosany, S., Prayag, G., Van Der Veen, R., Huang, S. and Deesilatham, S. (2017). Mediating effects of place attachment and satisfaction on the relationship between tourists' emotions and intention to recommend. *Journal of Travel Research*, 56(8), pp. 1079-1093. <https://doi.org/10.1177/0047287516678088>
- Hosany, S., Sthapit, E., & Björk, P. (2022). Memorable tourism experience: A review and research agenda. *Psychology & Marketing*, 39(8), 1467-1486.
- Ile-Alatau National Park, Главная страница. <https://www.ile-alatau.kz/ru/index-ru/>
Accessed 15 June 2024
- Jennings, G. & Nickerson, N.P. (2006). *Quality tourism experiences*. Oxford: Butterworth-Heinemann.
- Kement, U., Cavusoglu, M., Başar, B. & Küçün, N., 2024. Facial emotion recognition research in the hospitality and tourism industry: A thematic content analysis. *Worldwide Hospitality and Tourism Themes*, 16(2), pp.163-177. <https://doi.org/10.1108/WHATT-03-2024-0060>.
- Kim, D. W. & Kim, S. (2017). The role of mobile technology in tourism: patents, articles, news, and mobile tour app reviews. *Sustainability*, 9(11), p.2082. <https://doi.org/10.3390/su9112082>

- Kim, J.H. (2014). The antecedents of memorable tourism experiences: The development of a scale to measure the destination attributes associated with memorable experiences. *Tourism Management*, 44, pp.34-45. <https://doi.org/10.1016/j.tourman.2014.02.007>
- Kim, J.H., Ritchie, J.R. & McCormick, B. (2012). Development of a scale to measure memorable tourism experiences. *Journal of Travel Research*, 51(1), pp. 12-25. <https://doi.org/10.1177/0047287510385467>
- Korpela, K.M., Ylén, M., Tyrväinen, L. & Silvennoinen, H., 2010. Favorite green, waterside and urban environments, restorative experiences and perceived health in Finland. *Health Promotion International*, 25(2), pp.200-209. <https://doi.org/10.1093/heapro/daq007>.
- Leung, Y.-F., Spenceley, A., Hvenegaard, G.T. & Buckley, R., 2018. *Tourism and visitor management in protected areas: Guidelines for sustainability*. Gland, Switzerland: International Union for Conservation of Nature (IUCN). DOI: <https://doi.org/10.2305/IUCN.CH.2018.PAG.27.en>
- Li, B., Zhou, H., He, J., Wang, M., Yang, Y. & Li, L., 2020. On the sentence embeddings from pre-trained language models. *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, pp.9119-9130. DOI: [10.18653/v1/2020.emnlp-main.733](https://doi.org/10.18653/v1/2020.emnlp-main.733).
- Litvin, S.W., Goldsmith, R.E. & Pan, B., 2008. Electronic word-of-mouth in hospitality and tourism management. *Tourism Management*, 29(3), pp.458-468. DOI: <https://doi.org/10.1016/j.tourman.2007.05.011>.
- Liu, B. (2012). Sentiment analysis and opinion mining. *Synthesis Lectures on Human Language Technologies*, 5(1), pp. 1-167. <https://doi.org/10.2200/S00416ED1V01Y201204HLT016>
- Liu, B. (2015). *Sentiment analysis: Mining opinions, sentiments, and emotions*. Cambridge: Cambridge University Press.
- Liu, H., Chu, H., Huang, Q., & Chen, X. (2016). Enhancing the flow experience of consumers in China through interpersonal interaction in social commerce. *Computers in Human Behavior*, 58, 306-314.
- Lopes, A. I., Dens, N., De Pelsmacker, P., & Malthouse, E. C. (2023). Managerial response strategies to eWOM: A framework and research agenda for webcare. *Tourism Management*, 98, p.104739. <https://doi.org/10.1016/j.tourman.2023.104739>
- Mariani, M.M., Di Felice, M. & Mura, M. (2016). Facebook as a destination marketing tool: Evidence from Italian regional destination management organizations. *Tourism Management*, 54, pp. 321-343. <https://doi.org/10.1016/j.tourman.2015.12.008>
- Mao, Y., Shen, Y., Yang, J., Zhu, X. & Cai, L. (2022). Seq2Path: Generating sentiment tuples as paths of a tree. In: *Findings of the Association for Computational Linguistics: ACL 2022*, pp.2215-2225.
- Mahat, N.Z.D. & Hanafiah, M.H. (2020). Help me TripAdvisor! Examining the relationship between TripAdvisor e-WOM attributes, trust towards online reviews and

travellers' behavioural intentions. *Journal of Information and Organizational Sciences*, 44(1). <https://doi.org/10.31341/jios.44.1.4>

Majeed, S., Zhou, Z., & Ramkissoon, H. (2020). Online tourism information and tourist behavior: A structural equation modeling analysis based on a self-administered survey. *Frontiers in Psychology*, 11, p.599. <https://doi.org/10.3389/fpsyg.2020.00599>

Mahrous, A. A. & Hassan, S. S. (2016). Achieving superior customer experience: An investigation of multichannel choices in the travel and tourism industry of an emerging market. *Journal of Travel Research*, 56(8), pp.1049-1064. <https://doi.org/10.1177/0047287516677166>

Munar, A. M. & Jacobsen, J. K. S. (2014). Motivations for sharing tourism experiences through social media. *Tourism Management*, 43, pp.46-54. <https://doi.org/10.1016/j.tourman.2014.01.012>

OpenAI (n.d.). *ChatGPT Overview*. Available at: <https://openai.com/chatgpt/overview/> (Accessed: 16 June 2024).

O'Hern, M.S. & Kahle, L.R., 2013. The empowerment of social media: User-generated content as a driver of consumer engagement. *Journal of Interactive Business Research*, 5(4), pp.84-91. <https://doi.org/10.1177/0047287507304039>

Oh, H., Fiore, A. M. & Jeung, M. (2007). Measuring experience economy concepts: Tourism applications. *Journal of Travel Research*, 46(2), pp.119-132.

Özen, İ.A., & Özgül Katlav, E. (2023). Aspect-based sentiment analysis on online customer reviews: A case study of technology-supported hotels. *Journal of Hospitality and Tourism Technology*, 14(2), pp. 102-120. <https://doi.org/10.1108/JHTT-12-2020-0319>

Pandas Development Team (n.d.). *Pandas Documentation*. Available at: <https://pandas.pydata.org/docs/reference/index.html> (Accessed: 16 June 2024).

Peng, Y., Cao, L., Yu, S., Yang, W. & Wang, X. (2020). Aspect-based sentiment analysis in tourism research: A review and application. *Journal of Information Technology & Tourism*, 19(3), pp.275-293.

Pine, B. J. & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*, 76(4), pp.97-105.

Pine, B.J., & Gilmore, J.H. (1999). *The experience economy: Work is theatre & every business a stage*. Harvard Business School Press.

Prayag, G., Hosany, S., Muskat, B. & Del Chiappa, G. (2017). Understanding the relationships between tourists' emotional experiences, perceived overall image, satisfaction, and intention to recommend. *Journal of Travel Research*, 56(1), pp. 41-54. <https://doi.org/10.1177/0047287515620567>

Romero-Rodriguez, L.M., & Castillo-Abdul, B. (2023). Toward state-of-the-art on social marketing research in user-generated content (UGC) and influencers. *Journal of*

Management Development, 42(6), pp. 425-435. <https://doi.org/10.1108/JMD-11-2022-0285>

Ritchie, J.R.B. & Tung, V.W.S., 2011. Exploring the essence of memorable tourism experiences. *Annals of Tourism Research*, 38(4), pp.1367-1386. <https://doi.org/10.1016/j.annals.2011.03.009>.

Schmitt, B.H. (1999). *Experiential Marketing: How to Get Customers to Sense, Feel, Think, Act, Relate*. New York: The Free Press. DOI: 10.1362/026725799784870496

Schwartz, S.H., 2011. Values: Individual and cultural. In: F.J.R. van de Vijver, A. Chasiotis, and S.M. Breugelmans, eds. *Fundamental questions in cross-cultural psychology*. Cambridge: Cambridge University Press, pp. 463–493. <https://doi.org/10.1017/CBO9780511974090.019>

Turner, V.W. & Bruner, E.M. (1986). *The anthropology of experience*. Chicago: University of Illinois Press.

UNWTO (2022). *Sustainable tourism practices: A guide to managing visitor feedback*. Madrid: UNWTO.

Valente-Pedro, C., de Matos, N., & Pinto, P. (2023). Holisticscape—the extended servicescape to influence tourists’ holistic health. From a systematic literature review to a research agenda. *Tourism and Hospitality Research*, 14673584231210111.

Vishnu, S., Ramson, S.R.J., Senith, S., & Anagnostopoulos, T. (2021). IoT-enabled solid waste management in smart cities. *Smart Cities*, 4(3), pp. 1004-1017. <https://doi.org/10.3390/smartcities>

Zhang, Y., Xie, K. & Morrison, A.M. (2021). The effect of the COVID-19 pandemic on tourism: A sentiment analysis approach. *Tourism Management*, 85, p.104325. <https://doi.org/10.1016/j.tourman.2021.104325>

Zhang, Y. (2023). "An Empirical Study of Sentiment-Enhanced Pre-Training for Aspect-Based Sentiment Analysis." DOI: 10.18653/v1/2023.findings-acl.612

Appendix A

Dataset from Google Maps Reviews Scraper

This appendix contains the detailed dataset in the file: **19163_Google_Maps_Reviews_Scraper**, which includes the complete review information collected.

Appendix B

Aspect Identification and Aggregation Instructions

You are to analyze a set of visitor reviews for the Ile-Alatau National Park. Your task involves the following steps:

1. Aspect Identification and Aggregation:

- Go through each review and identify key aspects mentioned by visitors. Focus on the most frequently mentioned aspects, limiting to no more than seven.
- If similar aspects are mentioned across different reviews (like 'facilities' and 'amenities' or 'staff' and 'customer service'), aggregate them into a single aspect for a more streamlined analysis.

2. Aspect-Based Sentiment Scoring:

- For each identified aspect in a review, assign a sentiment score on a scale from 1 to 5, where 1 represents the most negative sentiment and 5 represents the most positive sentiment.
- Make a table with the review number along the aspects and points assigned, in []
- Provide a brief justification for each score, based on the tone and content of the review regarding that aspect.

3. Calculating Total Points for Each Aspect:

- After scoring each aspect in all reviews, calculate the total points scored for each aspect across all reviews. This will give an overall sentiment score for each aspect.

4. SWOT Analysis:

- Based on the aggregated scores and sentiments for each aspect, conduct a SWOT analysis for the Ile-Alatau National Park.

- The Strengths and Weaknesses should be derived from the higher and lower scoring aspects. Opportunities and Threats should be identified based on the potential improvements or challenges highlighted in the reviews.
- Provide a summary of your findings, highlighting the key aspects and their overall sentiment scores, along with a comprehensive SWOT analysis based on the data derived from the reviews.

Appendix C

Batch Processing Script for Review Analysis

```
# Batch processing
batch_size = 100
all_responses = []
last_review = 999 # Start from review 1000

for start in range(0, len(cleaned_reviews), batch_size):
    end = start + batch_size
    batch_reviews = cleaned_reviews[start:end]
    formatted_reviews = "\n\n".join(f"{i+1} - \"{review}\"" for i, review in
    enumerate(batch_reviews, start=start+1000))

    # Update instructions with the last processed review number
    current_instructions = instructions_prompt.format(last_review=start + 1000 +
    batch_size - 1)

    # API call to process the batch
    response = client.chat.completions.create(
    model="GPT-4-1106-preview",
    messages=[
    {"role": "system," "content": current_instructions},
    {"role": "user," "content": formatted_reviews}
    ],
    temperature=0,
    max_tokens=4000,
    top_p=1,
    frequency_penalty=0,
    presence_penalty=0
    )
```

```
# Collect responses
batch_response = response.choices[0].message.content
all_responses.append(batch_response)

# Delay to manage API rate limits
time.sleep(60)

# Compile all batch responses into one comprehensive analysis
final_analysis = "\n".join(all_responses)
print(final_analysis)
```

Appendix D

Analysis of Visitor Sentiments: Findings and Results

This appendix contains the detailed dataset in the files test.txt, 1000-2500, and 2500-5000.txt, which includes a comprehensive analysis of the information extracted.

Appendix E

This appendix provides a comprehensive breakdown of the dataset used in the study, as documented in the Excel file titled "**Aspect_Analysis_Slimmed_Automated_fixed.xlsx**". The file includes detailed metrics for each of the 21 critical aspects of visitor experience at Ile-Alatau National Park. Each row in the dataset corresponds to an individual aspect, featuring columns for sentiment categories (Very Positive, Positive, Neutral, Negative, and Very Negative) and additional metrics such as Total Comments, Total Points, and the calculated Sentiment Score for each aspect.

The "**Aspect_Analysis_Slimmed_Automated_fixed.xlsx**" file serves as the foundation for the sentiment analysis presented in Table 4.1. It is structured to provide both a numerical and visual representation of visitor sentiments, making it easy to interpret the strengths and weaknesses of various park features.