

Review of: "A Survey of Large Language Models in Tourism (Tourism LLMs)"

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Potential competing interests: No potential competing interests to declare.

Critically, the paper stands out for its depth and breadth, covering the evolution of LLMs from general applications to specific uses in tourism. It offers a detailed examination of the techniques for adapting LLMs to the tourism domain, such as continual pre-training, domain-specific pre-training from scratch, mixed-domain pre-training, and the use of prompt engineering. This thorough analysis provides valuable insights for researchers and practitioners in the field of AI and tourism.

However, there are areas that could be expanded upon or approached differently:

Empirical Evidence and Case Studies: While the paper outlines theoretical frameworks and potential applications of LLMs in tourism, it lacks empirical evidence and real-world case studies to demonstrate the practical impact of these technologies. Including case studies of successful implementations could provide a stronger foundation for the arguments presented and offer readers insights into the practical challenges and solutions encountered.

Ethical Considerations and Societal Impact The discussion on data privacy, security, and cultural sensitivity is valuable but somewhat brief. Given the significant ethical implications of deploying LLMs, especially in a domain as culturally rich and diverse as tourism, a more detailed exploration of these issues would be beneficial. This could involve discussing strategies for ethical AI development, including stakeholder engagement, transparency, and accountability mechanisms.

Technological and Infrastructural Limitations: The paper mentions technological and infrastructural limitations as challenges but does not delve deeply into these aspects. A more detailed analysis of the current limitations of LLMs, such as computational requirements, data biases, and the environmental impact of training large models, would provide a more balanced view of the feasibility of deploying these technologies in tourism.

Interdisciplinary Perspectives: The paper could benefit from incorporating more interdisciplinary perspectives, considering the intersection of AI, tourism, linguistics, cultural studies, and ethics. This would enrich the discussion on the multifaceted implications of LLMs in tourism and encourage collaboration across disciplines to address the complex challenges presented.

Future Research Directions: While the paper outlines some future research directions, it could offer a more detailed roadmap for future work, identifying specific gaps in the current literature and proposing concrete research questions. This

would be particularly useful for guiding the next generation of researchers in this rapidly evolving field.