



FINAL YEAR PROJECT REPORT

TRAVEL WISE: A SMART PERSONALIZED TRAVEL COMPANION

**In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)**

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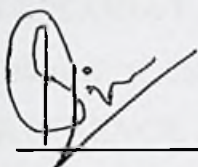
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FALL-2024

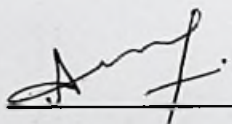
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We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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Specially dedicated to
My beloved grandmother, mother and father
Ayesha Ijaz
My beloved grandmother, mother and father
Simrah Ali
My beloved grandmother, mother and father
Kainat Khattak

ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express my gratitude to my project supervisor, Mr. Shahid Khan for his invaluable advice, guidance and his enormous patience throughout the development of the research.

In addition, we would also like to express our gratitude to our loving parents and friends who have helped and given us encouragement.

TRAVEL WISE: A SMART PERSONALIZED TRAVEL COMPANION

ABSTRACT

Tourism in Pakistan, particularly in cities like Karachi, Lahore, and Islamabad, often lacks personalized and reliable platforms, leaving lesser known but remarkable attractions unexplored. This gap arises as most existing platforms prioritize popular tourist spots without addressing individual traveler preferences or localized needs. Travel Wise tackles this issue by providing tailored recommendations using advanced recommendation systems. Content-based filtering compares user preferences against multidimensional attributes, delivering precise suggestions for attractions and hotels. Meanwhile, collaborative filtering uncovers patterns in user behavior through collective preferences, enabling predictive analytics for enhanced recommendations. Generative AI tools like Chat Groq API enrich the platform by generating detailed, personalized descriptions for suggested hotels and attractions. Additionally, real-time weather updates, a Chabot powered by Botpress, and multilingual support for languages like Urdu, Punjabi, Pashto, and Sindhi enhance user accessibility and experience. The platform integrates modern technologies: Django REST Framework for efficient backend operations, React.js for a dynamic and responsive frontend interface, and SQLite for lightweight yet scalable data storage. By combining these cutting-edge technologies with advanced algorithms like Random Forest and ALS, Travel Wise aims to revolutionize travel planning in Pakistan, offering users an innovative, reliable, and user-friendly platform to explore both hidden gems and popular destinations seamlessly.

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