North South University
Department of Electrical & Computer Engineering

Project Proposal

Course Code: CSE 299

Course Title: Junior Design Course

Course Faculty: M. Shifat-E-Rabbi [MSRB]

Project Name:

Ghurbo: An Intelligent Tour Planning and Travel Agency System

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Git Repository: https://github.com/Nafees-Ahommed/CSE299_Project-Ghurbo

Ghurbo: An Intelligent Tour Planning and Travel Agency System

Abstract

Planning a tour manually requires time, effort, and extensive research. This project proposes 'Ghurbo' — a smart travel planner and agency system that auto-generates tour plans based on customer preferences including budget, number of travellers, and duration. The system suggests ideal destinations, accommodations, attractions, food, and travel guides. It also recommends the best times to visit specific locations. Ghurbo aims to offer seamless end-to-end trip planning, enhancing convenience and travel satisfaction.

1. Problem Statement

Tour planning is a complex task that requires significant time and effort. Most travellers face difficulties in choosing suitable destinations, finding affordable accommodations, and coordinating daily activities within a specific budget and timeframe. Manual planning is often inaccurate and overwhelming, especially for novice travellers. There is a lack of intelligent systems that can automate and personalize the entire planning process based on dynamic inputs.

2. Literature Review

Several travel recommendation systems and tour planners have been proposed in literature, focusing on location suggestions, accommodation booking, and itinerary generation. Existing platforms such as TripAdvisor and MakeMyTrip provide fragmented services but lack integration. AI-based solutions like personalized itinerary planners use clustering or optimization models, but they often fail to offer complete cost breakdowns or real-time customization. This project aims to unify these features in one coherent platform.

3. Proposed Solution

Ghurbo will collect user inputs such as budget, travel duration, and group size to auto-generate an optimized tour plan. The system will suggest:

- Major tourist locations
- Hotel options with pricing
- Local attractions
- Local cuisines and food prices
- Estimated travel guide pricing
- Recommendations for the best time to visit

The backend will use a rule-based engine or machine learning logic to generate dynamic plans. A front-end interface will allow users to confirm and book the proposed plan.

4. Expected Outcome and Tools

Expected outcomes include a functional web-based application that provides auto-generated tour plans based on user input. Key tools and technologies planned for this project include:

- HTML, CSS, JavaScript, React for frontend
- Firebase for backend
- Visual Studio Code for development/testing
- GitHub for version control
- External APIs or mock data for hotels, food, and travel guides

5. Work Plan (Timeline)

Week 1: Requirement analysis, research

Week 2: Dataset preparation, GitHub setup

Week 3: Backend logic implementation

Week 4: Frontend and integration

Week 5: Testing and adjustments

Week 6: Final review, documentation, and video demo

6. References

[1] TripAdvisor. https://www.tripadvisor.com

[2] MakeMyTrip. https://www.makemytrip.com

[3] Dataset and APIs to be finalized during development.