**Group 6 Project 4 Overview**

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**Purpose**

The primary purpose of this software project is to develop an innovative road trip planner that adapts to location preferences dynamically. This tool aims to enhance the road trip planning experience by considering the changing interests of users based on visiting history as they progress through their journey. To simulate the real conditions of a road trip, this updated tool will also schedule user's travel plan day by day.

**Goals and Objectives**

Dynamic Preference Adjustment:

Implement a system that dynamically alters attraction preferences based on a user's visiting history, ensuring a diverse and engaging travel experience.

**Realistic Trip Planning:**

Create a planner that segments road trips into daily itineraries, considering maximum travel days and driving hours as specified by the user.

**Path Search Algorithm:**

Use neural network created from the training data to predict the user’s interest of each location based on the user-selected data set and use the predicted data to recommend the length of stay.

**Problem Statement**

Road trip planners that we built before lack the ability to adapt to changing user preferences during the journey. This limitation can lead to repetitive and less engaging travel itineraries. Our system aims to address this gap by introducing weights derived from neural network training and dynamic preference adjustments, making road trips more varied and tailored to the evolving interests of travelers.

**Scope and Objectives**

**Project Scope**

* Integrate the neural network trained in project 3 into the planner for predicting user preference.
* Develop an algorithm for dynamically allocating preferences.
* Adapt the road trip planner from project 2 to accommodate day-by-day planning.

**Limitations and Constraints**

* Time Limit: Two Weeks.
* Data Limitation: we will only have data from project 3, which is artificially generated, to train the neural network.
* Technologies: We will use python for development.