## **Initial Project Planning Report: Restaurant Recommendation System**

\*\*1. Project Title:\*\*

\* Restaurant Recommendation System using Machine Learning

\*\*2. Project Objectives:\*\*

\* Develop a personalized restaurant recommendation system that effectively addresses the challenges faced by diners in discovering and choosing the right dining experiences.

\* Improve user satisfaction by providing relevant and engaging restaurant recommendations.

\* Enhance customer reach and engagement for restaurants.

\* Gain valuable insights into user preferences and market trends.

\*\*3. Project Scope:\*\*

\* \*\*Focus:\*\* Develop a machine learning model that can effectively predict user preferences for restaurants based on various factors.

\* \*\*Data Sources:\*\* Utilize a combination of data sources, including user data (demographics, preferences, past dining history), restaurant data (location, cuisine, price range, reviews, ratings), and contextual factors (time, location, special occasions).

\* \*\*Methodology:\*\* Explore and implement various machine learning algorithms (e.g., collaborative filtering, content-based filtering, hybrid approaches) to build the recommendation system.

\* \*\*Evaluation:\*\* Evaluate the performance of the system using appropriate metrics (e.g., precision, recall, F1-score, user satisfaction surveys).

\*\*4. Project Deliverables:\*\*

\* A functional prototype of the recommendation system.

\* A comprehensive report documenting the project methodology, results, and insights.

\* A presentation summarizing the project findings and recommendations.

This initial project planning report provides a high-level overview of the project. The plan will be iteratively refined as the project progresses and new information and challenges arise.