Project Design Phase-I
Proposed Solution Template

Proposed Solution Template Date   07 November 2023

Team ID   592046

Project Name   Restaurant recommendation system

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	consumers face a daunting challenge in navigating an abundance of dining options, both familiar and unknown. Traditional methods of restaurant discovery, such as word-of-mouth recommendations or generic online reviews, often lack personalization and fail to consider individual preferences. As a result, users find themselves overwhelmed with choices and may miss out on hidden gems that align with their unique tastes. To address this problem, there is a need for an advanced and intelligent restaurant recommendation system that leverages cutting-edge algorithms to provide personalized suggestions based on user preferences, dietary restrictions, location, and other relevant factors..
2.	Idea / Solution description	To develop restaurant recommendation System leveraging the classification algorithms: Logistic Regression, KNN, Decision Tree, Random Forest ,k-means clustering , Apriori algorithm , reinforcement learning techniques , neural networks. This system inputs various aspects about the working professional like- awareness of restaurants, negative consequences of discussing with co-working professionals.
3.	Novelty / Uniqueness	Using Logistic Regression, Decision Tree, KNN, Apriori algorithm, k means clustering ,reinforcement techniques we would be recommending best restaurants nearby, We would be recommending some basic tips that might help them to choose their restaurant which is nearby and also satisfies their need.

4.	Social Impact / Customer Satisfaction	Enhanced Dining Experience,Users can enjoy a more personalized and satisfying dining experience by discovering restaurants that align with their preferences and tastes.Restaurant recommendation systems can contribute to cultural exchange by exposing users to a diverse range of cuisines and dining experiences, promoting culinary diversity.Small and local restaurants can benefit from increased visibility, as recommendation systems may help users discover hidden gems that they might not have found through traditional means.Users can engage with their local community by exploring recommended restaurants, participating in reviews, and sharing their own dining experiences.
5.	Business Model (Revenue Model)	The business model of a restaurant recommendation system typically involves multiple revenue streams and strategies to sustain and grow the platform.Offer premium subscription plans that provide users with enhanced features, such as ad-free experiences, exclusive restaurant discounts, priority reservations, or advanced filters for more personalized recommendations.Provide a free basic service with essential features and monetize through premium subscription options for users seeking additional benefits and advanced functionality.Allow restaurants to promote their establishments through targeted advertisements or sponsored recommendations. Advertisers could pay for increased visibility to a specific user segment or geographic location. .
6.	Scalability of the Solution	Divide large datasets into smaller, manageable partitions to distribute the load across multiple servers or nodes. This helps prevent bottlenecks and ensures efficient data retrieval.Implement database replication to create redundant copies of data on multiple servers. This not only enhances fault tolerance but also supports read scalability by allowing

		parallel reads from different replicas.Design algorithms and processes that can take advantage of parallel processing to distribute tasks across multiple computing resources.