

Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	13 November 2023
Team ID	Team-592784
Project Name	Project - Restaurant Recommendation System
Maximum Marks	4 Marks

Technical Architecture:

ARCHITECTURE

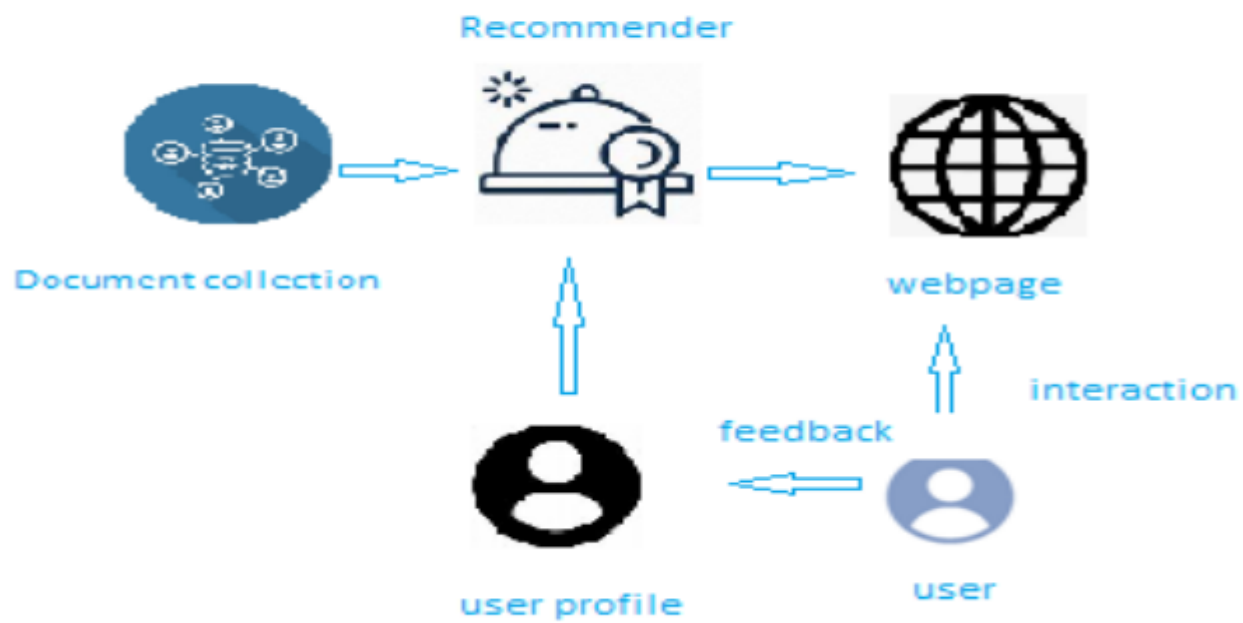


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Website to enter the name of the restaurant and get the recommendation on the basis of similarities	HTML, CSS
2.	Web Application Logic-1	The name of the application is entered in the website and then cosine similarities is performed to get the restaurant with the similar attributes. Then the result is presented in the website in sorted order of rating.	Python
3.	File Storage	All the web applications should be in the same folder and there should be at least 1 gb of storage free in the disk to store the data and application.	Local Filesystem
4.	Machine Learning Model	To recommend restaurant with Similar attributes and sort the result in the descending order of the rating	Recommendation System Model using AI
5.	Infrastructure (Server / Cloud)	Application Deployment on Local System	Local System

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	<p>The code uses the following open-source frameworks and libraries:</p> <ul style="list-style-type: none"> • Flask: A micro web framework for Python. • pandas: A data manipulation and analysis library. • scikit-learn: A machine learning library for Python, used for text vectorization (TF-IDF) and cosine similarity calculation. 	Flask
2.	Security Implementations	This web application does not explicitly implement security measures. In a production environment, it's crucial to implement security best practices, especially when handling user input and deploying web applications.	None.
3.	Scalable Architecture	The application follows a monolithic architecture, where the Flask web application, recommendation logic, and data processing are all handled in a single script.	Monolithic architecture

S.No	Characteristics	Description	Technology
4.	Availability	The application currently runs as a single Flask application, which may not be highly	Local System

		available. The User will have to download the web application and run it in their local system	
5.	Performance	The application, as it stands, is a basic implementation. Basically depends on the local system in which it runs.	Depends on local system of the user.

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>