

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

Date	03 October 2022
Team ID	PNT2022TMID591582
Project Name	Project – Understanding Audience: A Machine Learning Approach to Customer Segmentation
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

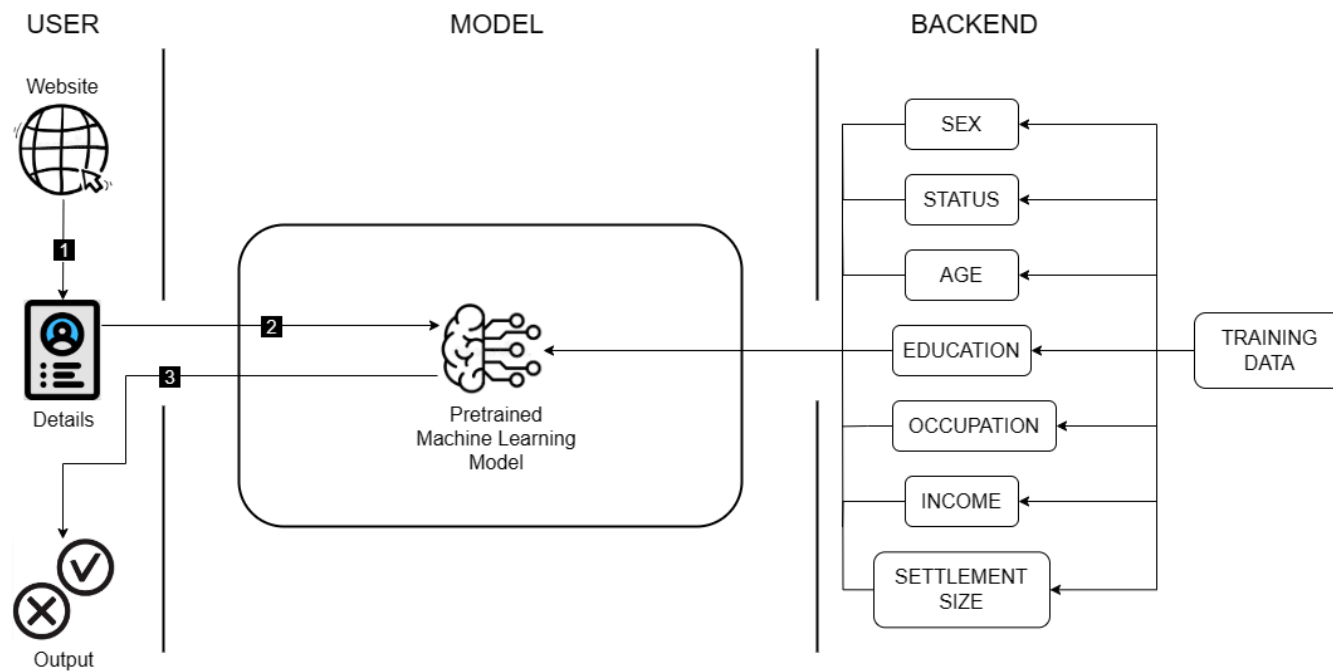


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Website (User Interface)	How user interacts with the model to predict the customer	HTML, CSS, Flask
2.	Application	Language used to build the application	Python
3.	Machine Learning Model	Packages used for the machine learning model	Scikit-Learn
4.	Application tools 1	Packages used to process the data	Numpy, Pandas
5.	Visualisation	Packages used to visualize the data	Seaborn, Matplotlib

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Scikit-Learn is an amazing library with tools dedicated for machine learning	Scikit-Learn
2.	Scalable Architecture	This Machine learning model can be scaled to input more data and can be introduced to more complex machine learning models using GridSearchCV	Adaboost Classifier, XGBoost Classifier, Decision Tree Classifier, Random Forest Classifier
3.	Availability	Application is hosted offline wherever downloaded. So there is no need to worry about the availability of the product.	Flask and python.
4.	Performance	Provides good results for large scale users as the model is locally hosted at each user.	Accuracy Score – Scikit Learn