

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

Date	15 October 2022
Team ID	PNT2022TMID53730
Project Name	Car Resale Value Prediction
Maximum Marks	4 Marks

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User interface	User interacts with the prediction model through website to predict the Car resale value .	HTML, CSS, JavaScript, Bootstrap.
2.	Database	The place where data can be stored and retrieved during the execution of the application.	Mysql
3.	Cloud Database	User for interaction components while using python flask.	IBM Cloud DB
3.	API	Used to call the function in order to access the execution in another framework	Python flask
4.	Application Logic	Logic for each and every process in the application	Python
5.	Machine Learning Model	This model is developed to predict the resale value of the car using random forest regressor algorithms	Sklearn, Algorithms – Random Forest Regressor

6.	Data processing	The available data is converted into the format which will be suitable for the ML model.	Pandas, Numpy, Matplotlib, Seaborn
----	-----------------	--	------------------------------------

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Backend Framework, CSS Styling framework, Relational Database	Python Flask, Mysql, CSS3, IBM Cloud DB
2.	Security Implementations	Email verification and authentication. Authentication and authorisation using Json object by comparing the data exists in database.	Direct verification using Backend Framework
3.	Scalable Architecture	Support for Multiple Sample prediction using Excel File	Pandas, Numpy
4.	Availability	The website will be made available by hosting it in cloud hosting platforms	IBM Cloud Hosting
5.	Performance	Multiple prediction requests should be handled simultaneously without affecting the speed and accuracy of prediction	Load Balancers, Distributed Servers

Technical Architecture:

