

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

Date	16 October 2022
Team ID	PNT2022TMID02157
Project Name	Project – Car resale value prediction
Maximum Marks	4 Marks

Technical Architecture:

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

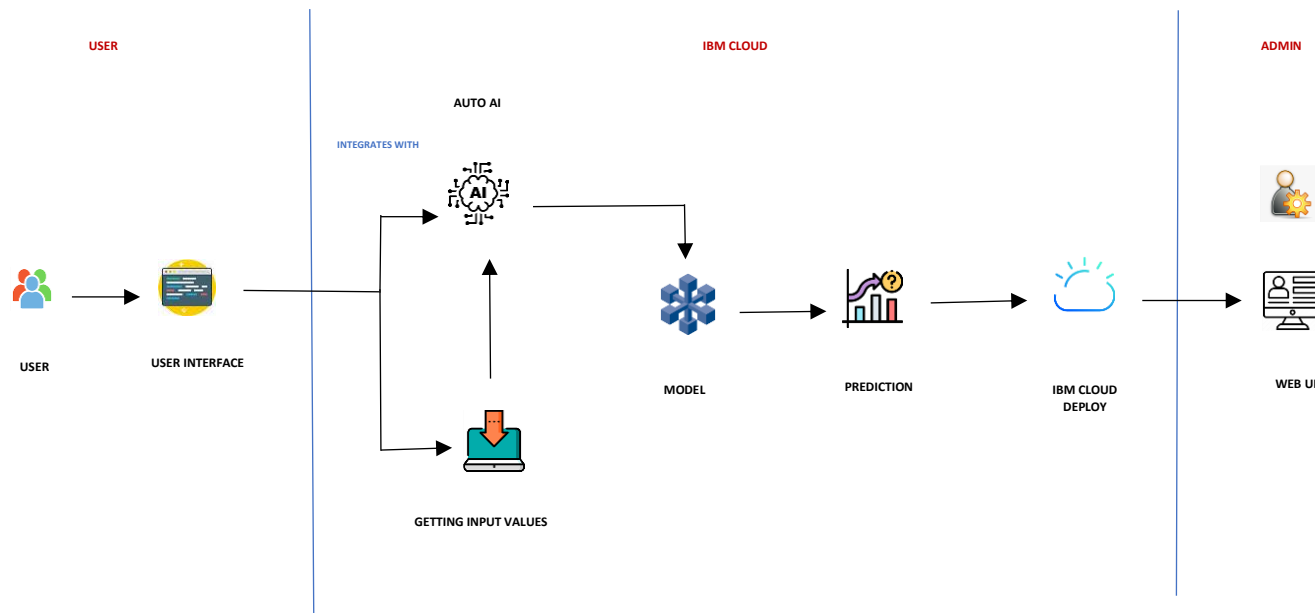


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interacts with the application through Web UI.	HTML, CSS, JavaScript, Flask - Python framework, etc.
2.	Application Logic-1 (Login)	Before enjoying the functionalities provided by the website, the user needs to register. Registration is meant to be done initially. Once an account is created, the login can be made using username and password.	Flask
3.	Application Logic-2 (predicting resale value)	After logging in, users can provide all the necessary details that are involved in predicting the resale value of the car. The details will be given to the trained ML model for making predictions. The predicted output will be displayed to the user.	Regression model (Machine learning)
4.	Application Logic-3 (Feedback)	This allows the users to enter their feedback. The provided feedback will be stored in the databases. This database helps in listing all the feedback provided by the user.	Database, Python, Flask
5.	Database	Data Type, Configurations etc.	MySQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage

8.	External API-1	None	None
9.	External API-2	None	None
10.	Machine Learning Model	To predict the resale value of the car from the provided values for the attributes.	Regression model.
11.	Infrastructure (Server / Cloud)	Application Deployment on Cloud <ul style="list-style-type: none"> Cloud Server Configuration IBM cloud service is used for the purpose of deployment.	IBM cloud, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	For developing web application Flask is being used. It's a web development framework. It uses python as its language. It helps in developing front end of the website. It helps in integrating backend with the IBM cloud.	Flask
2.	Security Implementations	Few algorithms which are inbuilt for network is being used. The framework contains internet protocol, etc.	e.g., IAM Controls.

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	This can be used from anywhere across with the help of internet. Since it's going to be launched in the IBM cloud, it can be accessed by anyone.	IBM cloud
4.	Availability	This is available to all the persons having internet facility and website link with them.	IBM cloud
5.	Performance	The model that is trained enhances the performance and provides results in few minutes.	Trained model.