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

Date	07 November 2022
Team ID	PNT2022TMID17820
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

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/
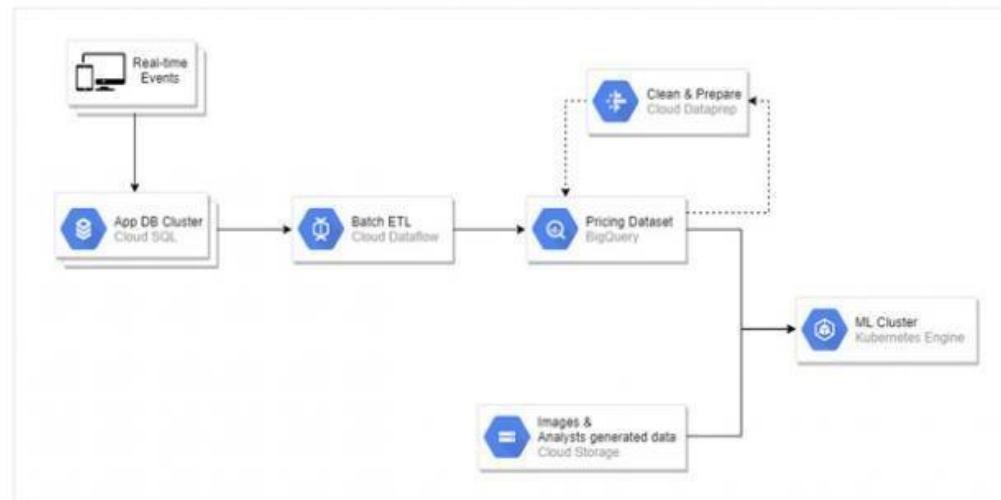
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Data preprocessing	Image of the particular vehicle uploaded through the websites and pre-processed using Machine learning algorithm	Using the various model used to process the data
3.	Value prediction	Machine learning model to predict the Value of the vehicle uploaded in the website	Various models
4.	Vehicle recommendation	After predicting the value , vehicle is suggested	Python
5.	Database	Data's are stored in database	MySQL, NoSQL, etc.
6.	Cloud Database	The model is described in the application	IBM DB2, IBM Cloudant etc.
7.	File Storage	Machine learning models are used for image pre-processing, value prediction and vehicle recommendation	Data pre-processing model ,value prediction model
	External API-1	Its used for the data pre-processing	IBM server , Google drive
8.	External API-2	For the users knowing value of the vehicle	Application
9.	Machine Learning Model	Machine Learning Model for processing the data and predicting the value	Object Recognition Model, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Google colaboratory , Anaconda Navigator, Jupyter Network,python flask	Data storage in google drive
2.	Security Implementations	The scalability architecture is 2-tier .The client is the user and server is the IBM cloud server	SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	It must support higher workloads without any issues	Models , IBM cloud
4.	Availability	Availability of applications for use of load balancers, distributed servers	IBM cloud
5.	Performance	Performance of the application should be high	IBM cloud

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