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

Date	15 October 2022
Team ID	PNT2022TMID45819
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/

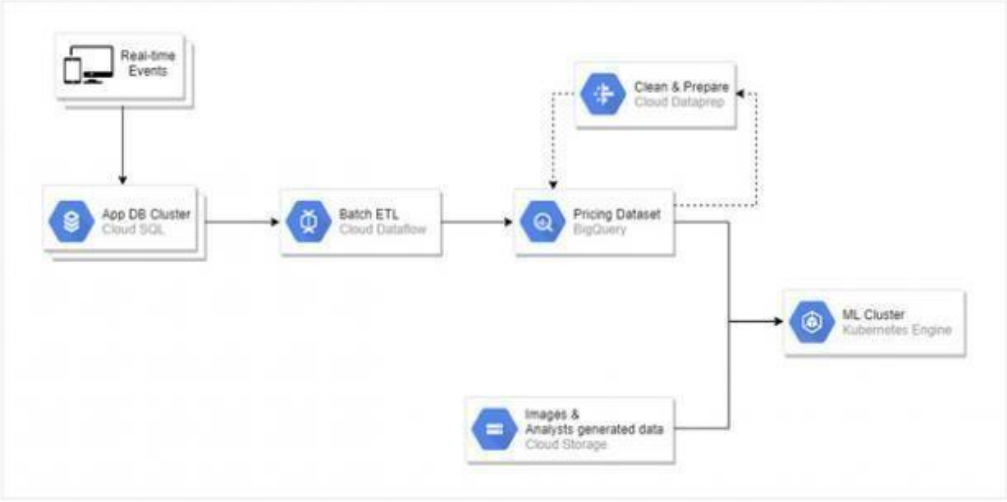

Table-1 : Components & Technologies:

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