Project Design Phase-II
Technology Stack - Architecture & Stack

Date	25 October 2022
Team ID	PNT2022TMID18748
Project Name	Project - Intelligent Vehicle Damage Assessment & Cost Estimator for Insurance Companies
Maximum Marks	4

Technical Architecture:

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

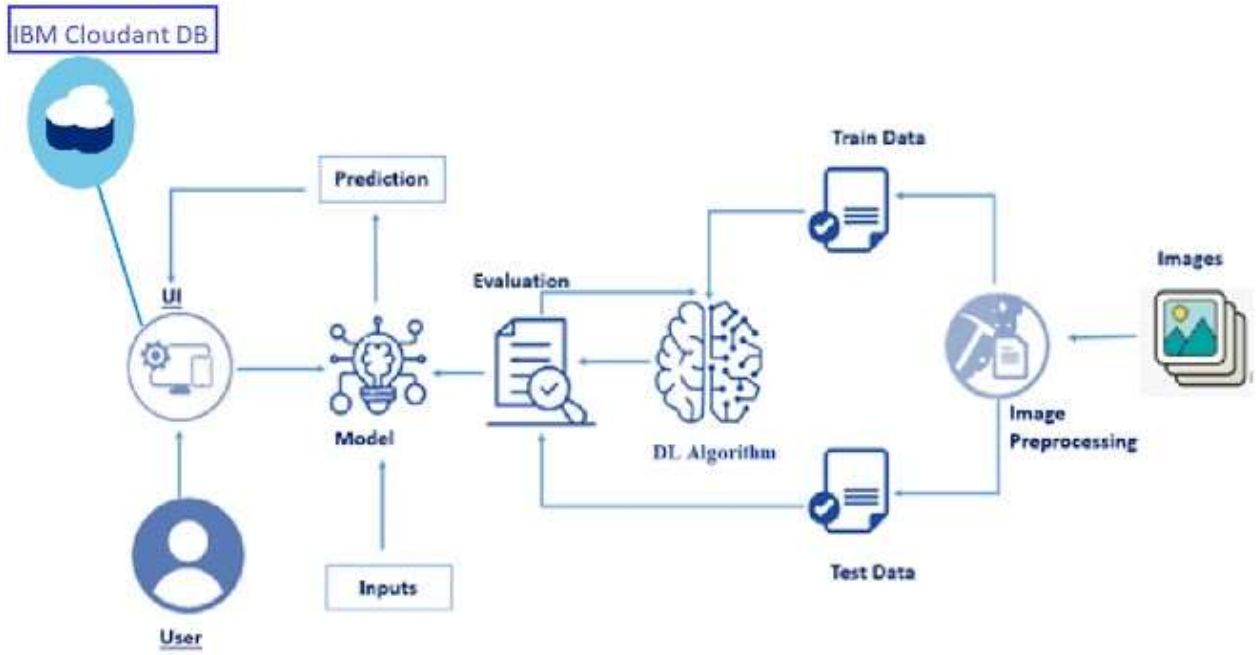

Table 1: Components and Technologies

S. No	Component	Description	Technology
1.	User Interface	How the user interacts with application. e.g. Web UI	HTML and CSS
2.	Application Logic-1	Handle all the user requests done through the Web UI / Display the results after process	Python Flask Server
3.	Application Logic-2	Process the image provided by the user via Web UI	Python
4.	Application Logic-3	Train the model and provide the classification result for the image given as input	IBM Watson Studio
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	File storage requirements	Local Filesystem
7.	Machine Learning Model	Purpose of Machine Learning Model	VGG16 Pre-Trained Model
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System	Local

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology

1.	Open-Source Frameworks	List the open-source frameworks used	Flask, TensorFlow, Keras , NumPy, OpenCV
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	IAM Controls
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	3-tier type (Web server, App server and DB server).
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Local: Available based on computer's specs. Cloud: Web server, DB server available when requested. App server requires high requirements compared with other 2 servers, thereby availability is bit less but can be compensated by cloud
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Accuracy of model: >85% (Expected) Number of requests per second: 250 – 1000 (based on network traffic, 250 is default as targeted user group is moderate)