PROJECT DESIGN PHASE II

TECHNOLOGY STACK

Date	15-10-2022
Team ID	PNT2022TMID35898
Project Name	A Novel Method for Handwritten Digit Recognition System
Maximum Marks	4 marks

Technical Architecture for Handwritten Digit Recognition System

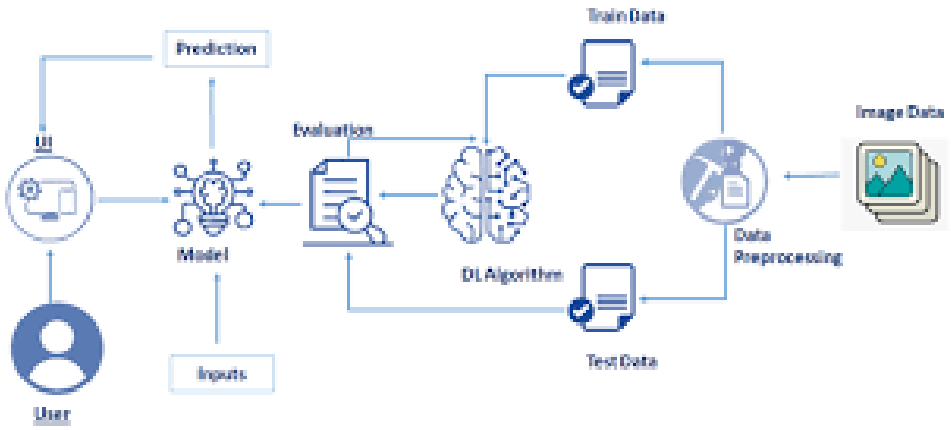

Table-1: Components & Technologies

S.No	Component	Description	Technology
1.	Website	User interacts with the prediction model through website to predict the fuel consumption	HTML, CSS, JavaScript / Angular JS / React JS etc.
2.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
3.	API	Used to extend the service to other applications	Flask Application
4.	DL and CNN algorithm	Using Neural networks to compute large amount data that trains the model	Deep Learning, Machine Learning, CNN.
5.	Data Pre-processing	Process of converting the raw data set into an clean data set	Dimensionality reduction
6.	Machine learning Model	This model is developed to predict the fuel consumption using ML algorithms	Sklearn, Algorithms - SVM & MLR
7.	Database	Data is pre-processed and used for training the model which is then used for prediction	Pandas, Numpy,Matplotlib

Table-2: Application Characteristics

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Used to freely access the public code	Angular JS / React JS
2.	Scalable Architecture	Justify the scalability of architecture (3 – tier,Micro-services)	Technology used
3.	Security Implementations	List all the security / access controls implemented,use of firewalls etc.	e.g. SHA-256, Encryptions, IAMControls, OWASP etc.
4.	Availability	The application will be available in all regions	Distributed servers
5.	Performance	Higher efficiency of performance. The applicationcan give response to requests within 5 sec	Technology used