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

Date	04 November 2022
Team ID	PNT2022TMID20912
Project Name	A Novel Method for Handwritten digit recognition system
Maximum marks	4 marks

Technical Architecture:

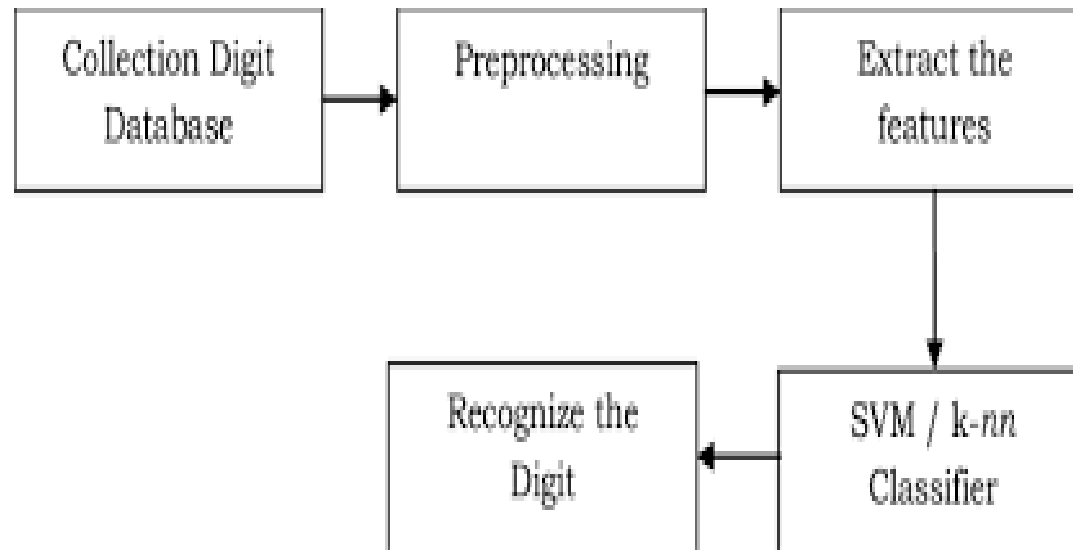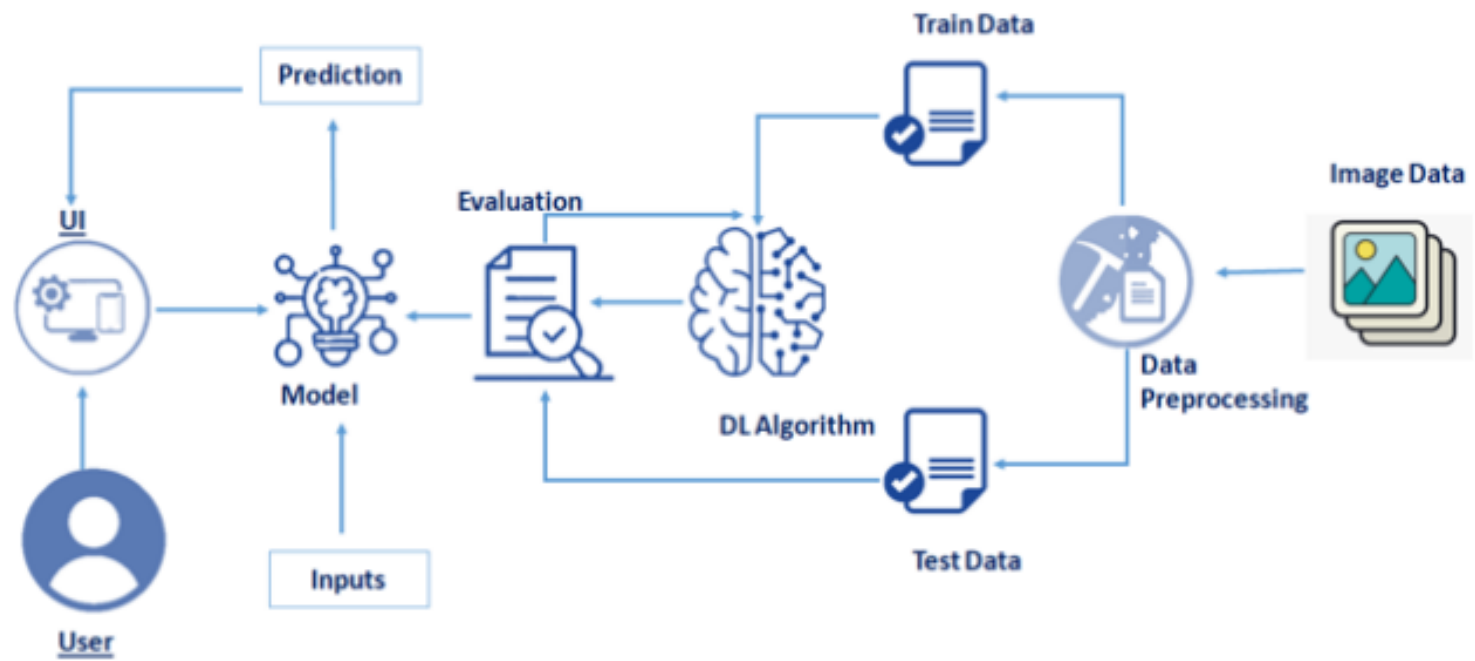**The process behind the handwritten digit recognition system is shown in Fig 1 and Fig 2**

Fig 1

Fig 2

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Deals with how user interacts with applications like chatbot	HTML , CSS, Javascript
2.	Application Logic-1	Login for the process in the application	Python
3.	Application Logic-2	Login for the process in the application	IBM Watson STT service
4.	Application Logic-3	Login for the process in the application	IBM Watson Assistant
5.	Database	Includes datatypes and configurations	MySQL, NoSQL, etc.
6.	Cloud Database	Involves Database services on cloud	IBM Cloudant
7.	File Storage	Storage of user files containing handwritten images	IBM Block Storage or Local Filesystem
8.	External API-1	Purpose of external API used in external application	IBM Weather API, etc.
9.	External API-2	Purpose of external API used in external application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local system/cloud Local server configuration: Cloud server configuration:	Local, Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List of open source frameworks used are	Tensorflow

S.No	Characteristics	Description	Technology
		mentioned here	
2.	Security Implementations	List all the security/access controls implemented, use of firewalls	e.g. SHA-256,OWASP etc.
3.	Scalable Architecture	To justify the scalability of the architecture used	3-tier, micro-services
4.	Availability	To justify the availability of application like load balancers	Distributed servers
5.	Performance	Design consideration for the performance of the application	Google Co-lab pro, require high end system