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

Date	20 Nov 2022
Team ID	PNT2022TMID52191
Project Name	Predicting the energy output of wind turbine based on weather condition
Maximum Marks	4 Marks

Technical Architecture:

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

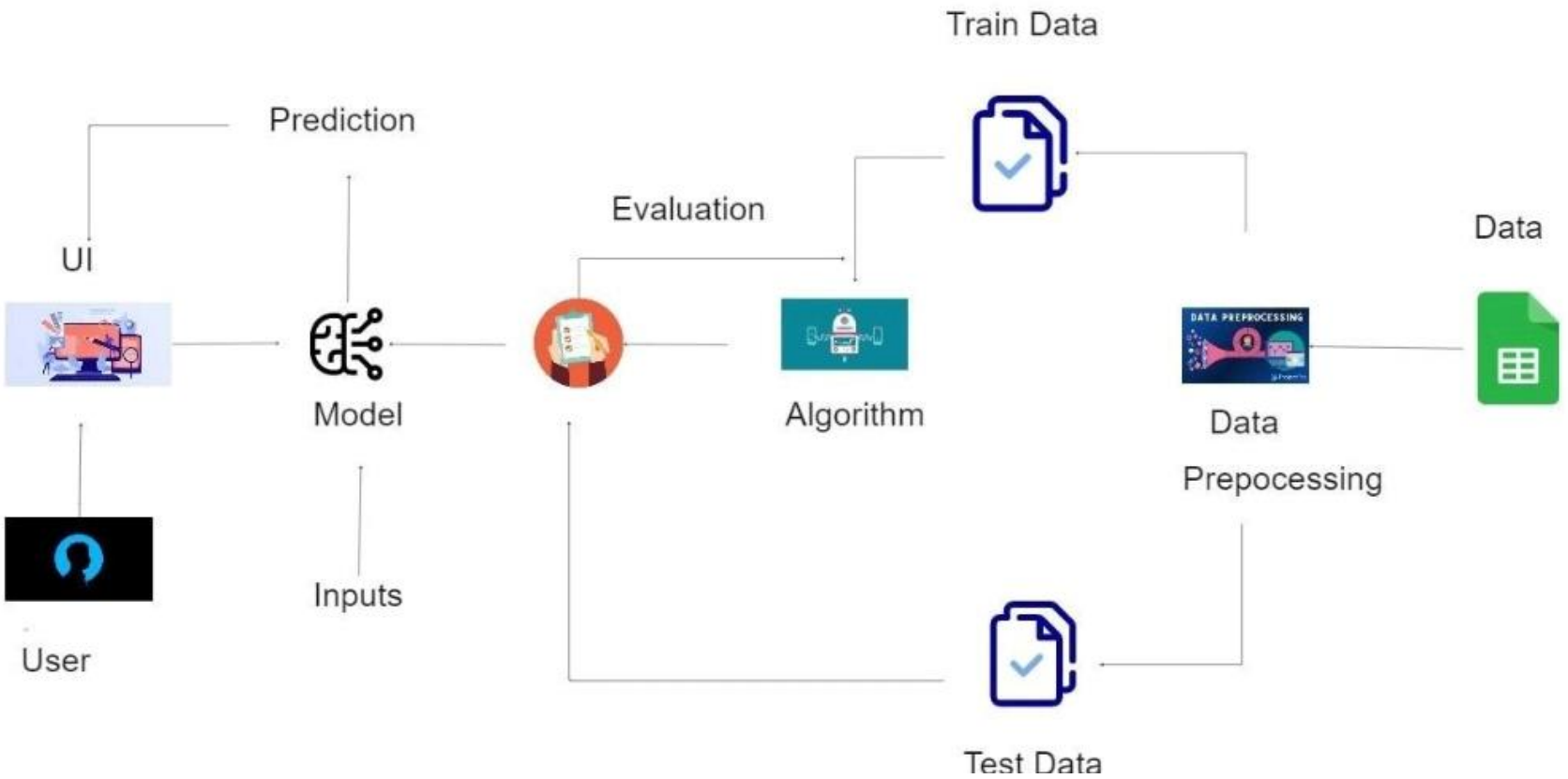

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	API	HTML, CSS, JavaScript /Angular Js / React Js etc.
2.	Application Logic-1	Data Pre-processing	Java / Python
3.	Application Logic-2	Data Input	IBM Watson STT service
4.	Database	Previous Year data	MySQL, NoSQL, etc.
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudantetc.
6.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API	Purpose of External API usedin the application	IBM Weather API, etc.
8.	Machine Learning Model	Purpose of Machine LearningModel	Weather prediction Model, etc.
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	FLASK
2.	Security Implementations	List all the security / access controls implemented, use offirewalls etc.	SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Cloud
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed serversetc.)	Distributed cloud service
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	SDN