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

Date	19 October 2023
Team ID	NM2023TMID07506
Project Name	Solar Panel Forecasting
Maximum Marks	4 Marks

Technical Architecture:

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

Reference: https://www.researchgate.net/publication/348418456_Solar_Power_Forecasting_A_Review

Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
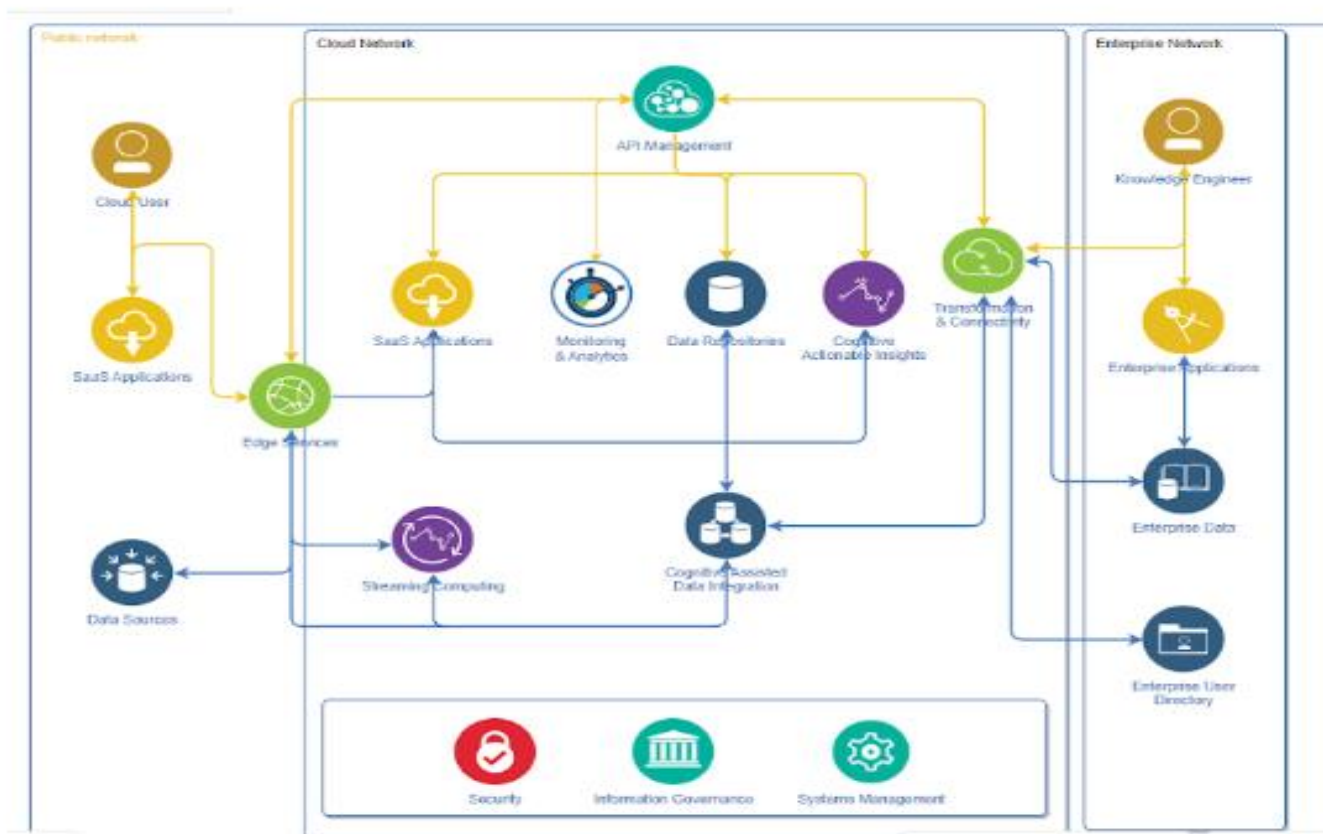5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.NO	Component	Description	Technology
1.	Data Source	The origin of the data, which may come from multiple sources.	Database, Web API's, CSV, Excel
2.	Data Storage	Where the Data is Retrieved for Analysis and Retrieval.	Relational database, NoSQL database, Cloud storage
3.	Data Processing	The software that transforms and aggregates raw data into usable information	ETL tools, Python, R, SQL
4.	Data Analysis	The process of examining data sets to draw conclusions about the information they contain	Business intelligence tools, data visualization tools, statistical analysis software
5.	Data Reporting	The process of sharing insights and findings from the data analysis	Dashboards, Reports, Presentations, Email Alerts
6.	Data Security	The measures taken to protect sensitive data from unauthorized access or theft	Encryption, Access control, Firewall, Security Audit
7.	Infrastructure	The hardware and software that supports the data analytics system	Servers, Cloud computing, Virtualization, Containerization

Table-2: Application Characteristics:

S.NO	CHARACTERISTICS	DESCRIPTION	TECHNOLOGY
1	Purpose	The primary reason for developing the application	Business requirementsUse cases
2	Functionality	The features and capabilities of the application	Programming languages, Frameworks, Libraries
3	User Interface	The visual and interactive design of the application	UI/UX Design Tools, HTML/CSS, JavaScript, Front-end Frameworks
4	Platform	The operating system or hardware environment the application is designed for	Windows, Linux, iOS, Android, Web
5	Scalability	The ability of the application to handle increasing amounts of users or data	Cloud Computing, Load Balancers, Horizontal Scaling

References : https://www.researchgate.net/publication/348418456_Solar_Power_Forecasting_A_Review