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

Date	**19 September 2022**
Team ID	**4.4(591486)**
Project Name	**Network anomaly detection**
Maximum Marks	**4 Marks**
Team members names	**Niraianbu** **Abirami** **Kamalnath** **Tharunya**

Technical Architecture:

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

Guidelines:

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

Table-1 :

Technology Stack for Anomaly Detection Project.

S.No	Component	Description	Technology
1	User Interface	How the user interacts with the application (e.g., Web UI, Mobile App, Chatbot, etc.)	HTML, CSS, JavaScript, Angular Js, React Js, etc.
2	Application Logic-1	Logic for a process in the application	Java / Python
3	Application Logic-2	Logic for a process in the application	IBM Watson STT service

S.No	Component	Description	Technology
4	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5	Database	Data type, configurations, etc.	MySQL, NoSQL, etc.
6	Cloud Database	Database service on the cloud	IBM DB2, IBM Cloudant, etc.
7	File Storage	File storage requirements	IBM Block Storage, Other Storage Service, Local Filesystem
8	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9	External API-2	Purpose of External API used in the 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, Kubernetes, etc.)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Machine Learning Model	Object recognition for network anomaly detection	ML models for object recognition, etc.

S.No	Characteristics	Description	Technology
2.	Infrastructure (Server / Cloud)	Application deployment on local system or cloud	Local server configuration, Cloud-based deployment (e.g., Cloud Foundry, Kubernetes)
3.	Open-Source Frameworks	List the open-source frameworks used	Technology of open-source frameworks
4.	Security Implementations	List all security/access controls implemented, use of firewalls, etc.	SHA-256, Encryption, IAM Controls, OWASP, etc.
5.	Scalable Architecture	Justify the scalability of architecture (e.g., 3-tier, Micro-services)	Technology used for scalability
6	Availability	Justify the availability of the application, e.g., use of load balancers, distributed servers, etc.	Technology used for availability
7	Performance	Design considerations for application performance, including requests per second, use of cache, and CDNs, etc.	Technology used for performance

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d