

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

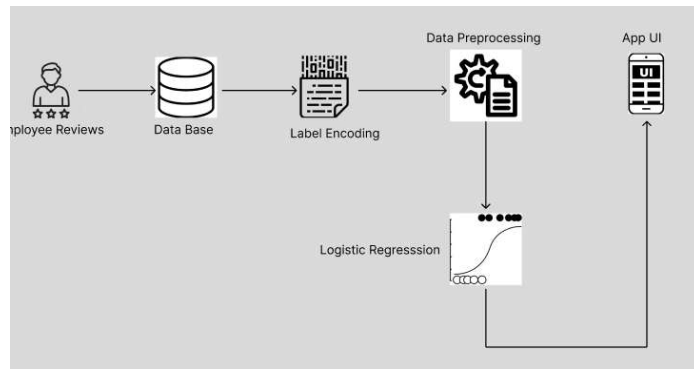
Date	27 October 2023
Team ID	Team-592453
Project Name	Project - Work Force Retention System
Maximum Marks	4 Marks

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>



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.	User Interface	Web UI	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Database	Data Type	MySQL
4.	File Storage	File storage requirements	Local Filesystem
5.	Machine Learning Model	We use Logistic Regression/KNN, since we have to predict wheather its 0 (No) or 1 (Yes) for the employee attrition.	Logistic Regression/KNN

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks used in the project	React.js, Django (Python), PostgreSQL
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Encryption, access control policies, OWASP
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Microservices Architecture, Kubernetes

S.No	Characteristics	Description	Technology
4.	Availability	Ensuring high availability of project/application	Load Balancers, Redundancy, Distributed Servers
5.	Performance	Design considerations for optimizing project/application performance	Caching, CDN, Asynchronous Processing

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>