

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

Date	3 October 2022
Team ID	PNT2022TMID53278
Project Name	Corporate employee attrition analytics
Maximum Marks	4 Marks

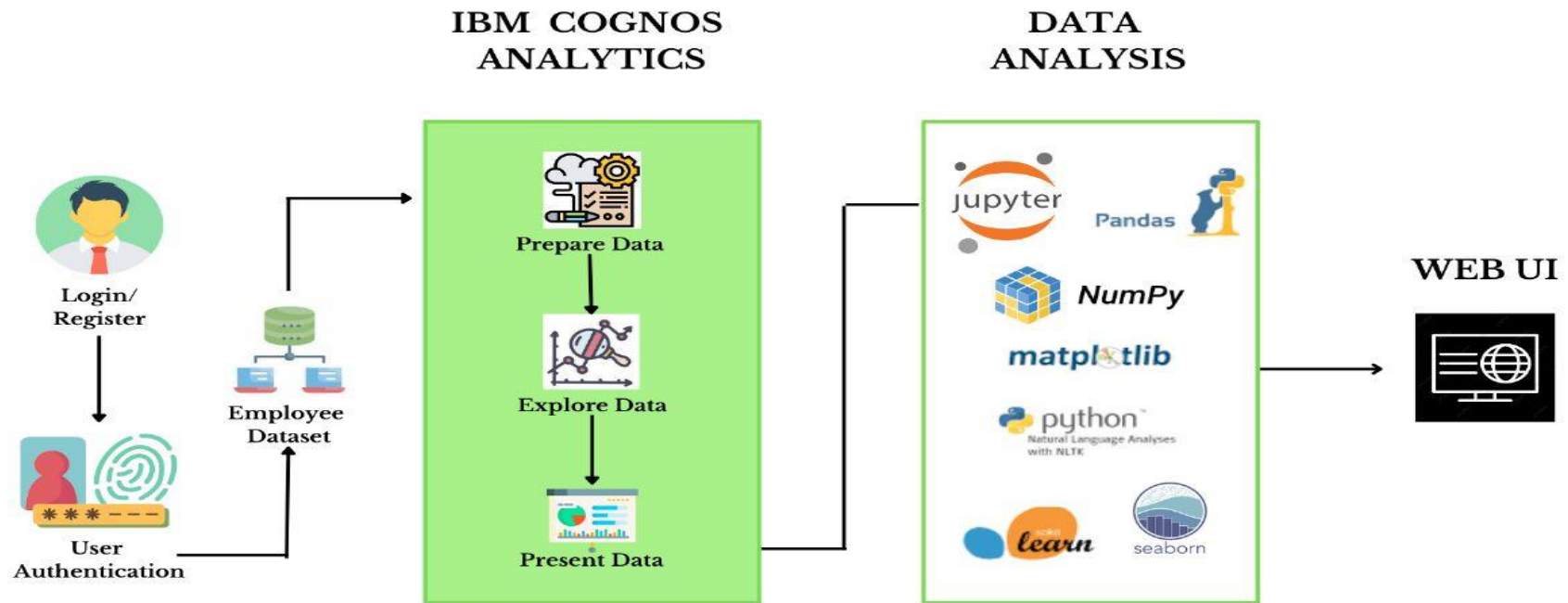


Table-1 : Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The user must interact with IBM Cognos technology and upload the dataset for analysis.	IBM Cognos
2.	Data cleaning	Only the required data fields are selected and unwanted data is discarded	IBM Cognos
3.	Relationship Establishment	Relationships across data fields is established	IBM Cognos
4.	Application Logic 1	The dataset is read and the results are visualized in the form of pie charts and bar graphs	IBM Cognos
5.	Machine Learning Model	To predict the accurate reason for which employees leave a company.	Google collab and deep learning models
6.	Dataset	Contains all the data of various factors faced by an employee	Kaggle
7.	Application Logic 2	Used for analysing the dataset and displaying the necessary results	Python

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open source software is code that is designed to be publicly accessible —anyone can see, modify, and distribute the code as they see fit.	Google collab, Jupyter notebook
2.	Security Implementations	IBM cloud application provides security features that are in addition to many of the components identified in the security framework.	IBM Cloud Pak for security
3.	Scalable Architecture	Python's flexibility also allows Ray to instrument Python code to make ML/AI scalability possible without requiring distributed systems expertise and	Python

S. No	Characteristics	Description	Technology
		lots of invasive code changes. Hence, ML/AI users get the benefits of cluster-wide scalability with minimal effort.	
3.	Availability	Availability is the ability of the system to withstand or recover from exceptional situation.	Google collab
4.	Performance	Application performance indicates how the app is functioning and how responsive the app is to the end-user. There are tools available to measure Application Performance and enable app developers to detect and diagnose complex application performance problems to maintain the expected level of service to end-users.	Google collab/ Python