

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

Date	03 October 2022
Team ID	PNT2022TMID28535
Project Name	Project - AI-Powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 Marks

Technical Architecture:

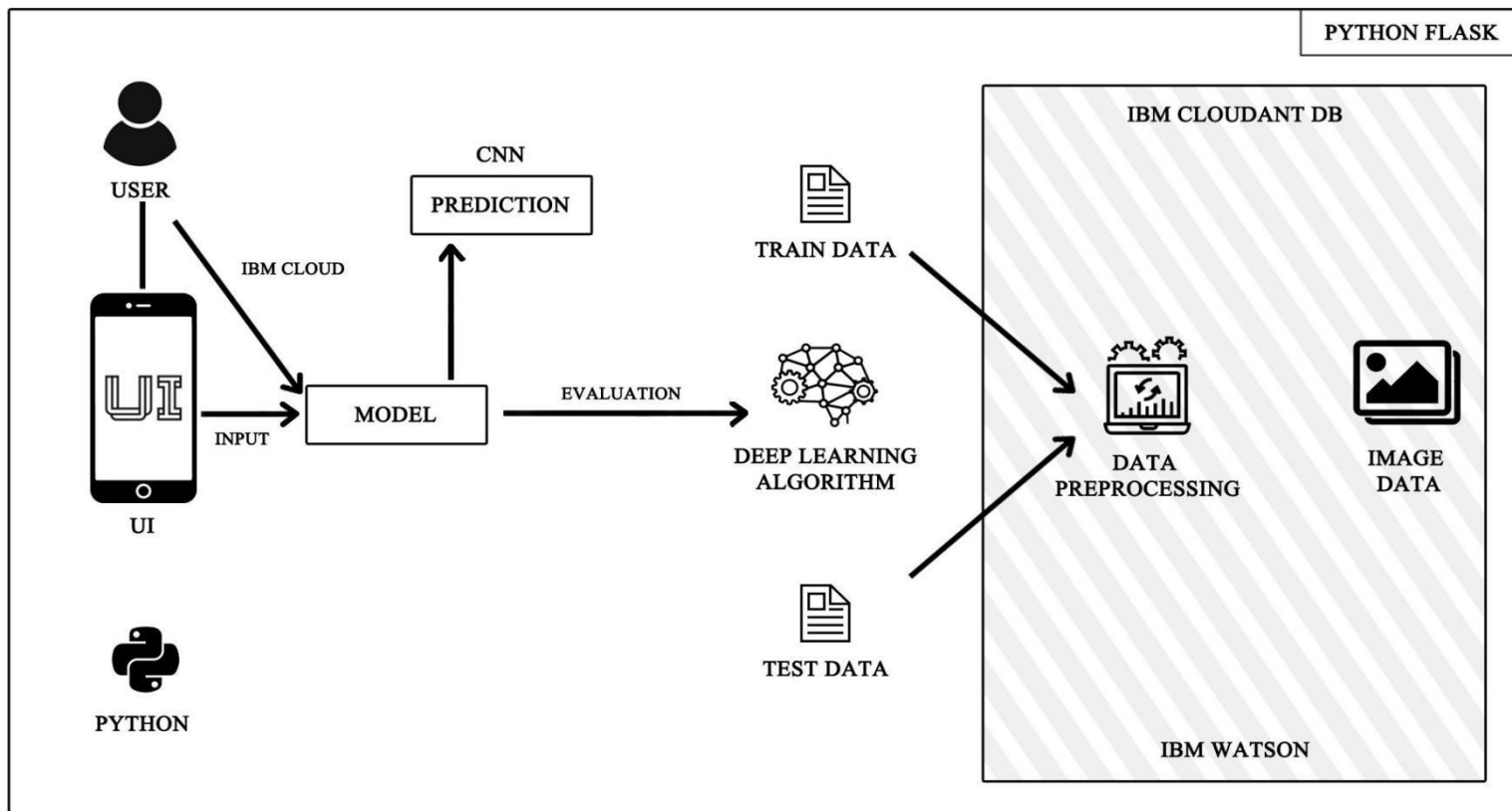


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application to check the details of the user, diet plans and the intake of food	HTML, CSS, JavaScript, Python Flask
2.	Image Processing and Data processing	User can upload or process the data	Python
3.	Application Logic-2	Backend Application Queries & Database	IBM Cloud Services
4.	Application Logic-3	Training Model on IBM and integrate it with the flask Application	IBM Watson Assistant
5.	Database	User Input data, food intake by user and the queries will be stored	IBM Cloudant DB
6.	Cloud Database	Database Service on Cloud	IBM Cloud
7.	File Storage	User requirements will be stored in the file storage	Cloud -> Drive
8.	Evaluation	Structured methods for examining and evaluating the success of training or learning experiences	Deep Learning
9.	Prediction	The model's first predictions are made using input to CNN, then produces error predictions. Final predictions are combined by above predications.	CNN

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	An open source framework is a model for creating software that was created by a community of software engineers. These frameworks are available to the public for free and serve as the basis for creating software applications. Request for an encrypted authentication.	Python, Python Flask, Html, CSS, Javascript, Node.js
2.	Security Implementations	In the face of attacks, this application must maintain its resilience. The application's behavior must be accurate and predictable.	Authentication, Authorization, Encryption, Logging, and Application security testing
3.	Scalable Architecture	To handle the additional work load, it is scaled up. In other words, you may scale up the system (software + hardware) to handle the increasing work load if the work load suddenly surpasses the capability of your current software + hardware combination.	IBM Cloud, IBM Cloudant DB
4.	Availability	Users must be able to access the online application 99.9% of the time each month during office hours.	IBM Cloud Hosting
5.	Performance	The application must be adaptable enough to serve daily visitors while maintaining peak performance.	IBM Load balance