

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

Date	14 October 2022
Team ID	PNT2022TMID34147
Project Name	AI-powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 Marks

Technical Architecture:

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

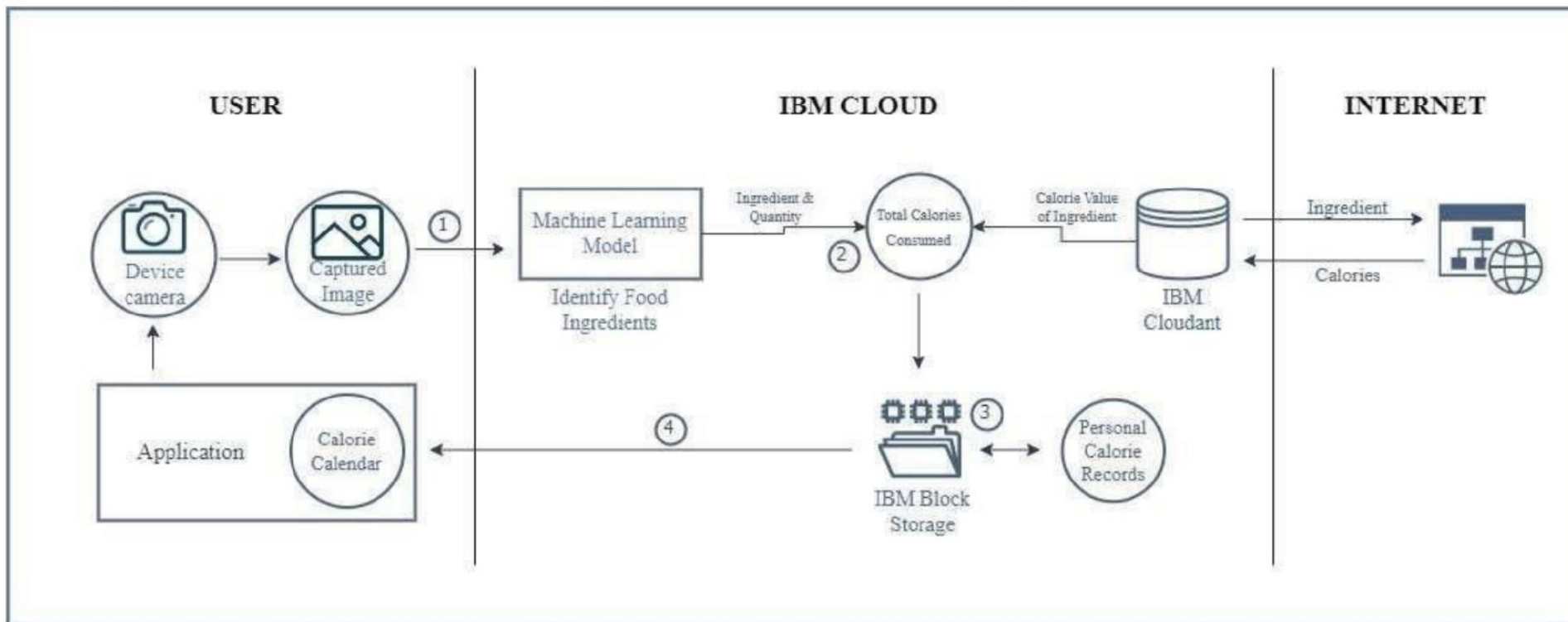


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User can able to give their details and create a profile and provide better feedback about the nutrition.	HTML, CSS, JavaScript / react.
2.	Application logic	Upload the image and the app will predict the nutrition values.	Python , Pandas
3.	Detection model	When the image is uploaded , it detect the image and provide the accurate value of the nutrition	Image processing using pandas
4.	Database	In database , the ingredients values are stored in the files.	MySQL
5.	Cloud Database	Database service on cloud.	IBM DB2, IBM Cloudant etc.
6.	Monitoring	The app application monitor the user's and provide the correct schedule for the user's.	IBM Notifications
7.	File Storage	File system is used to organize and store data in internal device.	IBM Block Storage
8.	External Application	External purpose are used to determine the nutrition and calories of the images	Aadhar AP
9.	Machine Learning Model	To detect the image, capture the photos are analyzed using machine learning algorithms.	Object Recognition Model.
10.	Infrastructure	The program is deployed to cloud for use Configuration of the cloud server	Object Recognition Model, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Google Colab, Online Website	Python, Pandas, HTML, CSS, JavaScript
2.	Security Implementations	Request authentication using encryption	SSL, Encryptions Algorithm
3.	Scalable Architecture	The scalability consists of user interface between input and output .	Customer feedback, reviews and rating

S.No	Characteristics	Description	Technology
4.	Availability	User should increased by loads balance in cloud VPS	IBM Cloud hosting
5.	Performance	The application should handle high speed and good quality of result	Testing-Black, White and IMB Load Balance.