

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

Date	03 October 2022
Team ID	PNT2022TMID30319
Project Name	Fertilizers Recommendation System For Disease Prediction
Maximum Marks	4 Marks

Technical Architecture:

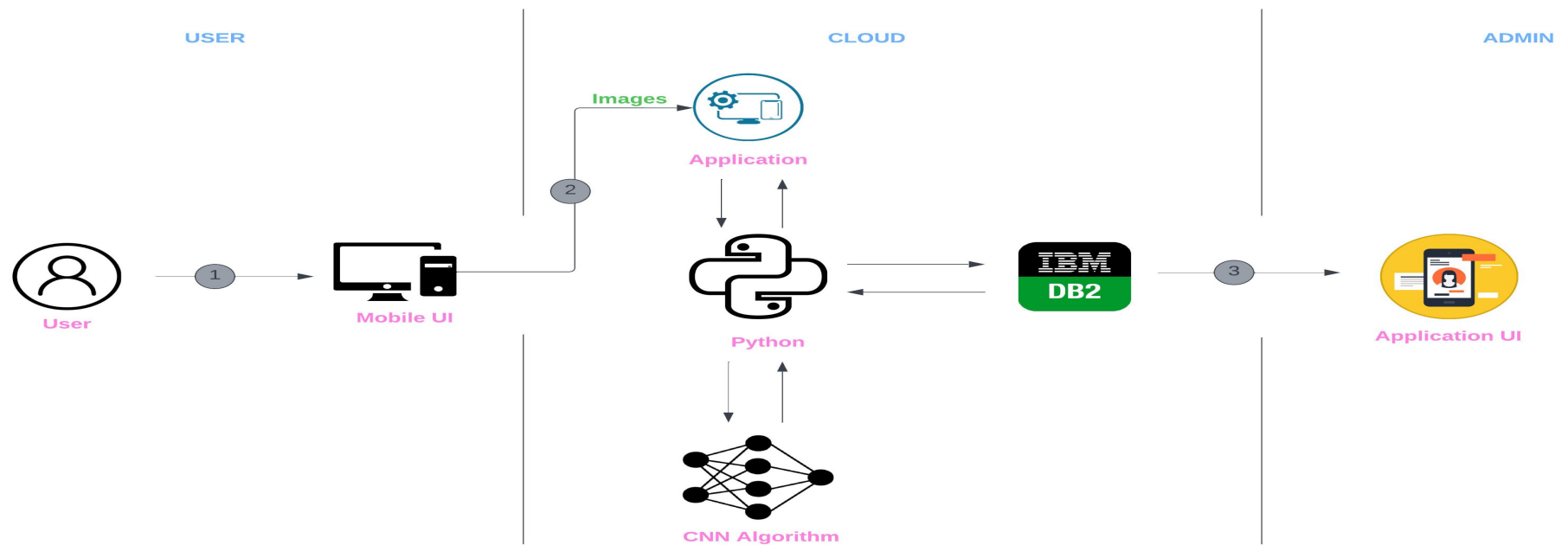


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Mobile Phone	User interacts with mobile phone to predict the Fertilizers.	HTML, CSS, python,etc.
2.	Process	It process the set of images to preprocessed and to be trained and tested.	Python
3.	Cloud Database	The IBM cloud database contains non structural data such as dataset and disease affected images.	IBM cloud_DB(NoSQL),IBM Cloudant etc.
4.	File Storage	The input files to be stored as IBM cloud and after it will show the recent files.	IBM Block Storage or Other Storage Service or Local Filesystem.
5.	Deep Learning Model	The deep learning model to use of image classification and image segmentation,prediction.	Algorithms-Support Vector Machine,etc.
6.	Infrastructure (Server / Cloud)	Application deployment on local mobile systems	Cloud servers and other cloud services.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Backend Framework,Frontend Framework,RDS	Pyhton,Figma,IBM cloud.
2.	Security Implementations	Authentication is done by the each user to use the application and User protection,Encrypt and decrypt the data.	(E.g.)IAM controls and SSH key.
3.	Scalable Architecture	Support large number of images to be accessed using data framing.	Numpy,pandas.
4.	Availability	Availability increased by using application load balancers.It will reduce load of the application.	IBM cloud network and security.
5.	Performance	The prediction goes to 1000 predicts in nano second	IBM load balancers and deployment of servers