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

Date	15 October 2022
Team ID	PNT2022TMID35185
Project Name	Digital Naturalist - AI Enabled tool for Biodiversity Researchers
Maximum Marks	4 Marks

Technical Architecture:

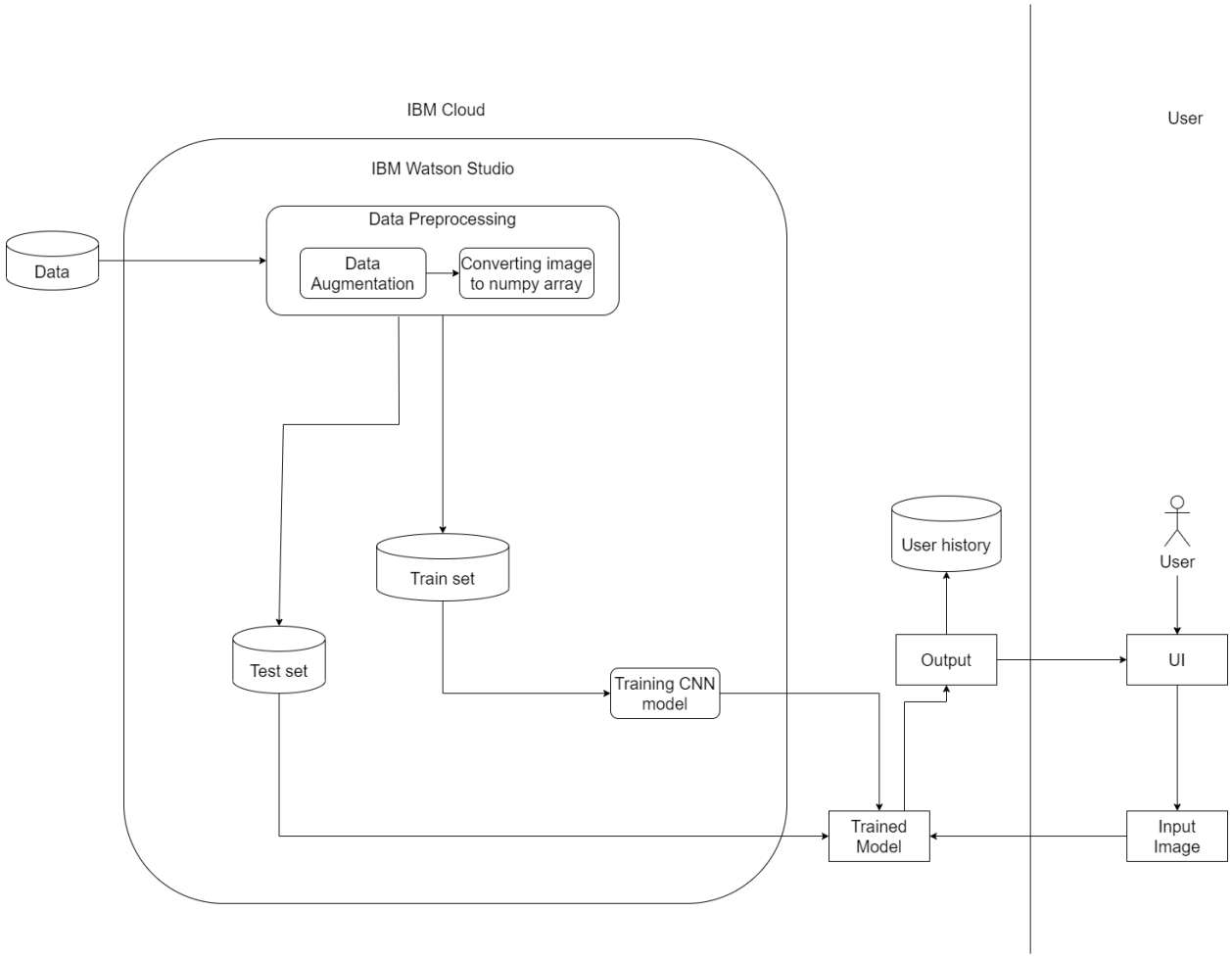

Table 1 : Components & Technologies:

S No	Component	Description	Technology
1	User Interface	Web UI or Website	HTML, CSS
2	Application Logic - 1	Image upload	Python Flask
3	Application Logic - 2	Display search history	Python, HTML, Flask, IBM Cloud
3	Image Recognition Model	To predict the species (flora and fauna) through image provided	CNN
4	Infrastructure (Server/Cloud)	Application Deployed on cloud server	IBM Cloud

Table-2: Application Characteristics:

S No	Characteristics	Description	Technology
1	Open-Source Framework	Open-Source frameworks for data preprocessing, web application and model training	Keras, Python Flask, Tensorflow, CNN, scikit-learn and matplotlib
2	Scalable Architecture	Capacity of the application to handle growth, especially in handling more users.	IBM Cloud
3	Availability	Without near 100% availability, application reliability and the user satisfaction will affect the solution.	IBM Cloud
4	Performance	How the application is functioning and how responsive the application is to the end-users depending on the performance of IBM cloud platform.	IBM Cloud