

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

Date	15 October 2022
Team ID	PNT2022TMID21994
Project Name	Digital Naturalist - AI Enabled tool for Biodiversity Researchers
Maximum Marks	4 Marks

Technical Architecture:

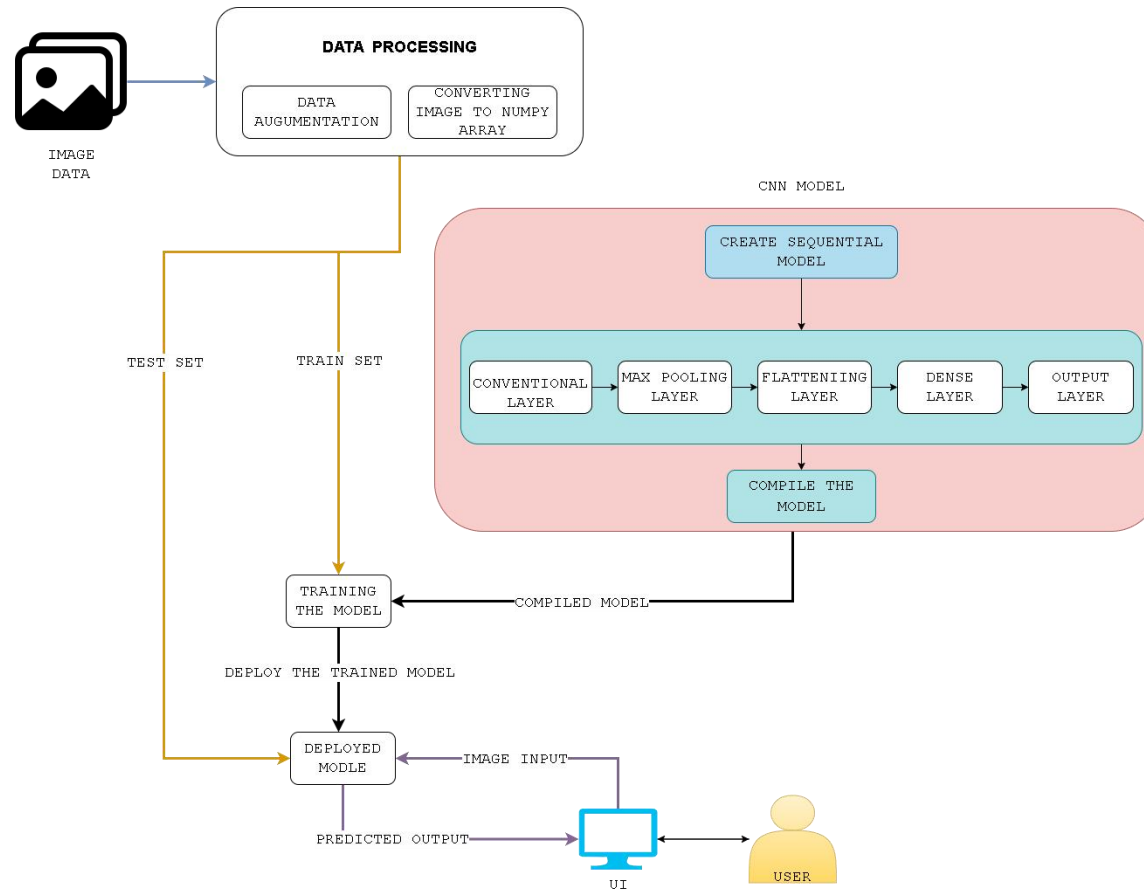


Table-1 : Components & Technologies:

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

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-Source frameworks for data preprocessing, web application and model training	Technology of Opensource framework
2.	Security Implementations	Capacity of the application to handle growth, especially in handling more users.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Availability	Without near 100% availability, application reliability and the user satisfaction will affect the solution.	Technology used
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.	Technology used