Project Design Phase-IITechnologyStack(Architecture&Stack)

Date	28 October 2022
Team ID	PNT2022TMID20804
Project Name	Digital Naturalist - AI Enabled Tool for Biodiversity Researchers
Maximum Marks	4 Marks

Technology architecture:

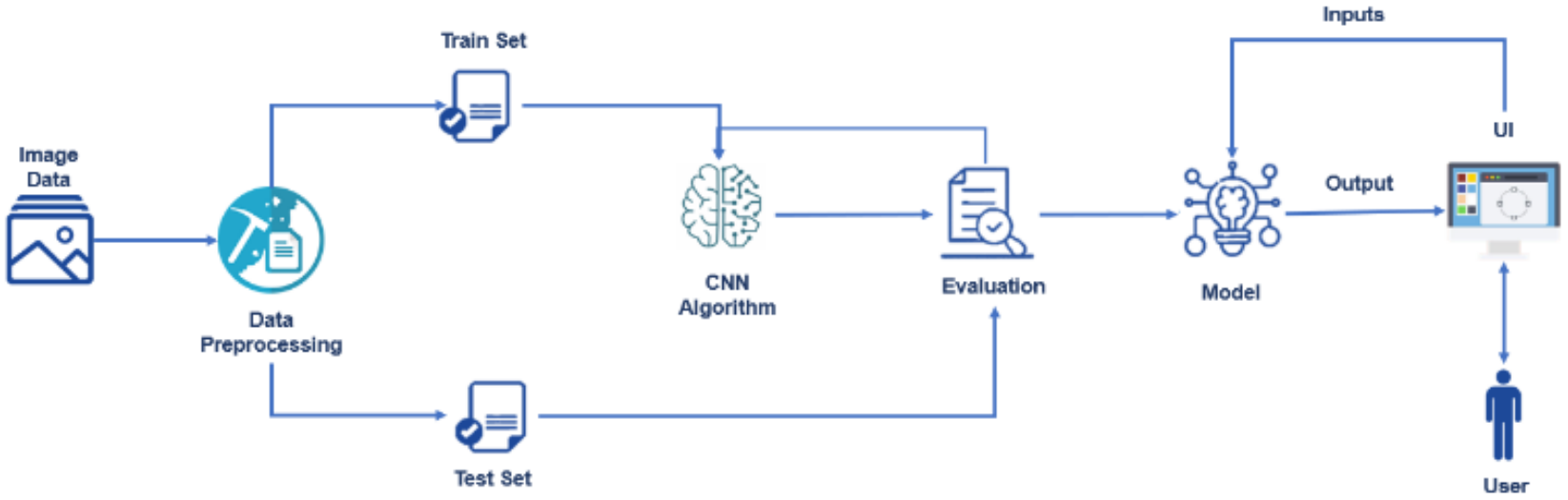

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The end user interacts with web application through Web UI	HTML, CSS, JavaScript.
2.	Application Logic	Interpret the input image	Python
3.	Cloud Database	Database Service on Cloud.	IBM DB2, IBM Cloudant.
4.	File Storage	File storage requirements	IBM Block Storage, Local Filesystem.
5.	Infrastructure (Server / Cloud)	Application Deployment on Local System / CloudLocal Server Configuration:	Local, Cloud Foundry, Kubernetes.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The open-source framework used is python flask	Python flask
2.	Security Implementations	MAC access control is used.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc
3.	Scalable Architecture	3 – tier architecture	Web Server – HTML, CSS, JavaScriptApplication Server – Python Database Server – IBM DB2
4.	Availability	Use of Load Balancing to distribute network traffic across servers	IBM Load Balancer
5.	Performance	Design consideration for the performance of the application	IBM Content Delivery Network