

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	03October 2022
Team ID	PNT2022TMID11740
Project Name	Emerging method for Early Detection of Forest Fires
Maximum Marks	4 Marks

Technical Architecture:

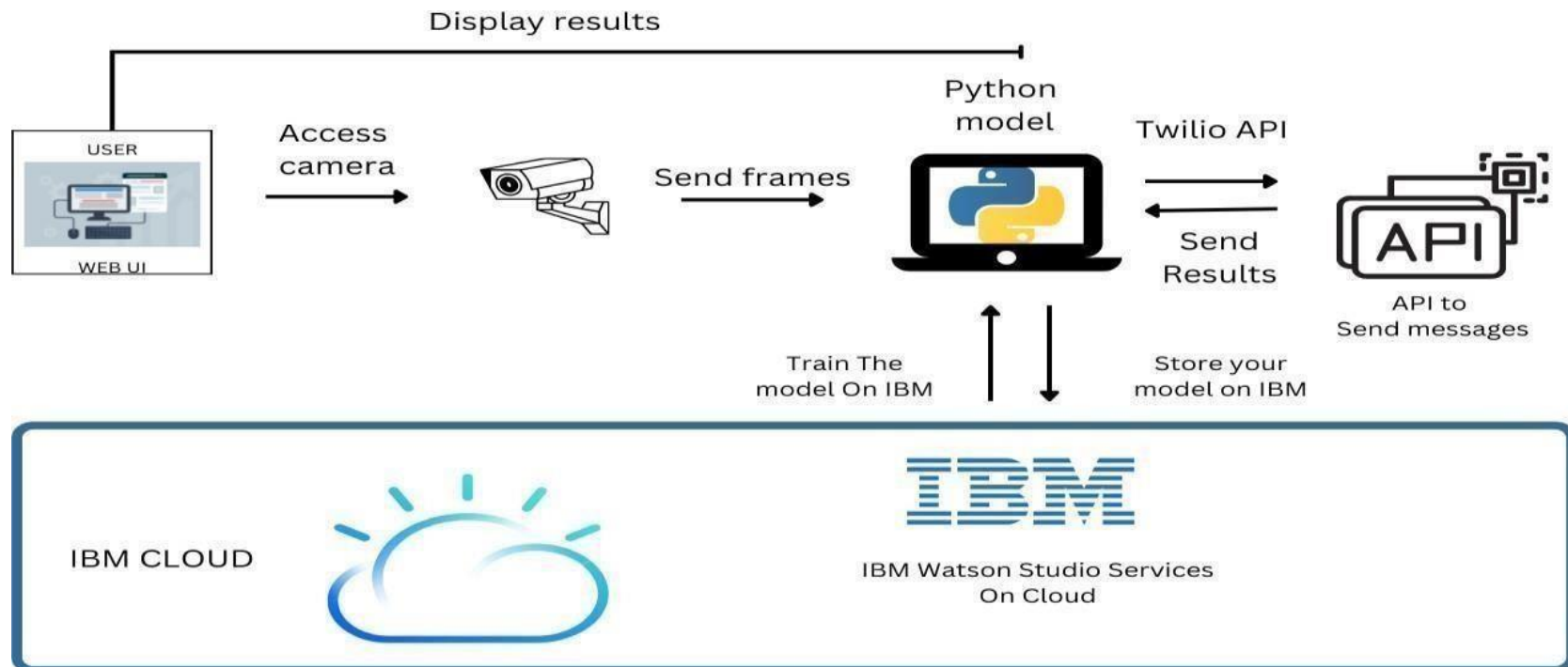


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Image processing	Pre-processing the model using datasets	Java / Python
3.	Camera	Image extraction	Python
4.	Object	Object extraction	Python
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	Temperature detection	Purpose of access the current weather data	IBM Weather API, etc.
9.	Object identify using UAV	Purpose of instant mechanism to prove to identity	Aadhar API, etc.
10.	Machine Learning Model	Purpose of machine learning model	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration Twilio API to send messages	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Python
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	HTML ,CSS and JavaScript
4.	Availability	Justify the scalability of architecture (3 – tier, Micro-services)	Python
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	CNS Network, AI