Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	14 October 2022
Team ID	PNT2022TMID50673
Project Name	Emerging Methods For Early Detection Of Forest
Maximum Mark	4 Marks

Technical Architecture:

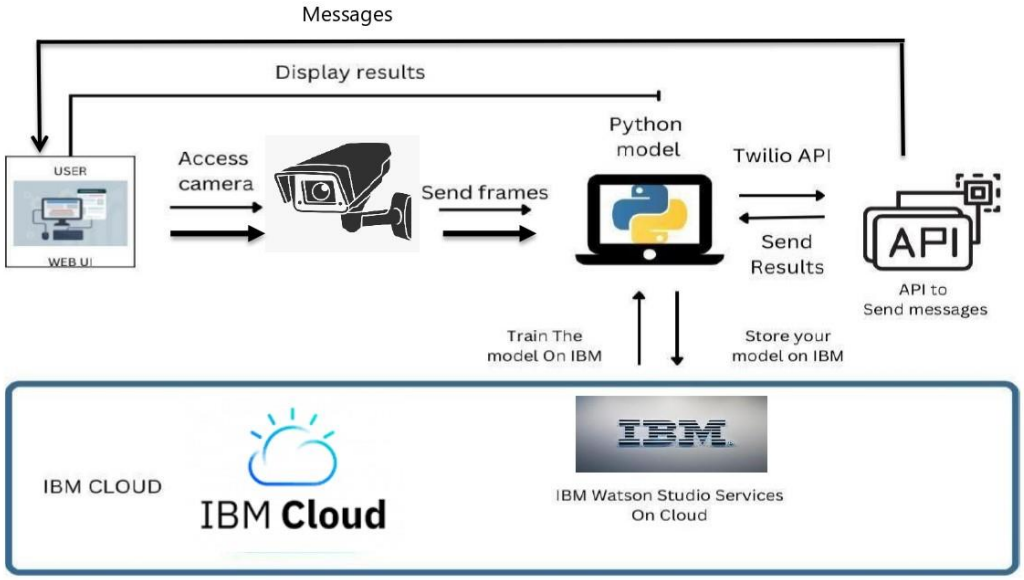

Table-1:

Components & Technologies:

S.No	Components	Description	Technology
1.	User Interface	The user uses the	Python/HTML,CS

		console to access the interface	S,Javascript and react.Js
2.	Input	Video feed	Web camera/video on a site
3.	Conversion	Video inputed is converted into frames	Frame Convertor
4.	Feeding the model	The frames are sent to the deep learning model	Our model
5.	Dataset	Using test set and train set, train the model	Data set from cloud storage,database
6.	Cloud Database	The model is trained in the cloud more precise with detections more images cqan be added later on	IBM Cloudant ,Python Flask
7.	Infrastructure(Server/Cloud), API	Application deployment on local system/cloud local,cloud server configuration,Twilio API tosend messages	Java/Python,React,Js,Java script,HTML,CSS, IBMCloud,OPEN CV,Anaconda Navigator,Local

Table-2:

Application Characteristics:

S.No	Characteeristics	Description	Technology

1.	Open source frameworks	Python Flask framework is used	Technology of opensource frameworks
2.	Security implementations	Mandatory Access Control(MAC) and preventive security control is used	SHA-256,Encryption,IAM Controls,OWASP
3.	Scalable Architecture	High scalability with 3-tier architecture	Web srver-HTML,CSS,Javascript application server-Python,Anaconda Database server-IBM DB2
4.	Avalability	Use of load balancing to distribute traffic across servers	IBM Load balancer
5.	Performance	Enhance the performance by using IBM CDN	IBM Content Delivery Network