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

Date	04 November2022
Team ID	PNT2022TMID50335
Project Name	Emerging methods for early detection of forest fire
Maximum Marks	4 Marks

Technical Architecture:

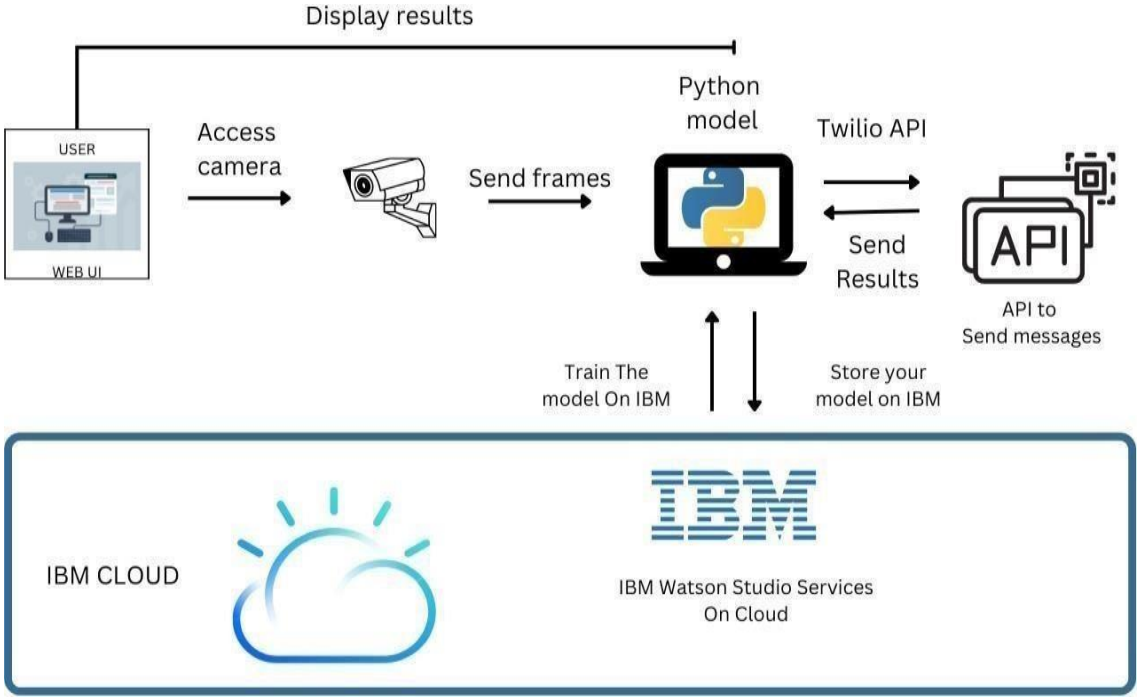

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User interface	The user uses the console to access the interface	Python/HTML, CSS, JavaScript and React Js etc.
2.	Database	Data type,configuration etc..	NO SQL
3.	File storage	File storage requirements	Local file system
4.	Cloud database	The model is trained in the cloud more precise with detection more images can be added later on	IBM cloud and,python class
5.	Conversion	Video inputed is converted into frames	Frame converter
6.	Input	Video feed	Web camera/video on a site
7.	Video feed frame camera	Used to exact the frames from video	HTML,CSS,Javascript
8.	Infrastructure(server/cloud)	Application deployement on local system/cloud server confiquration	Ibm cloud
9.	Video streaming and alerting	Open CV for video processing use twilio API to send messages	Open cv,TwilioAPI
10.	Deep learning model	Purpose of deep learning model(CNN,RNN,YOLO)	Object recognition model,etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Opensource framework	Python flask framework is used	Technology of opensource framework
2.	Scalable architecture	High scalability with 3 tier architecture	Webserver -HTML,CSS,Javascript application server-python,anaconda database server-IBM DB2
3.	Availability	Cloud platform	IBM cloud
4.	Security implementation	Mandatory access control(MAC) and preventative security control is used	E.g.SHA-256,Encryption,IAM Controls,OWASP etc.
5.	Performance	Train and test the many request at a time	Online deployment to IBM cloud