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

Date	10-November-2022
Team ID	PNT2022TMID45404
Project Name	Emerging method for Early Detection of Forest Fires
Maximum Marks	4 Marks

Technical Architecture:

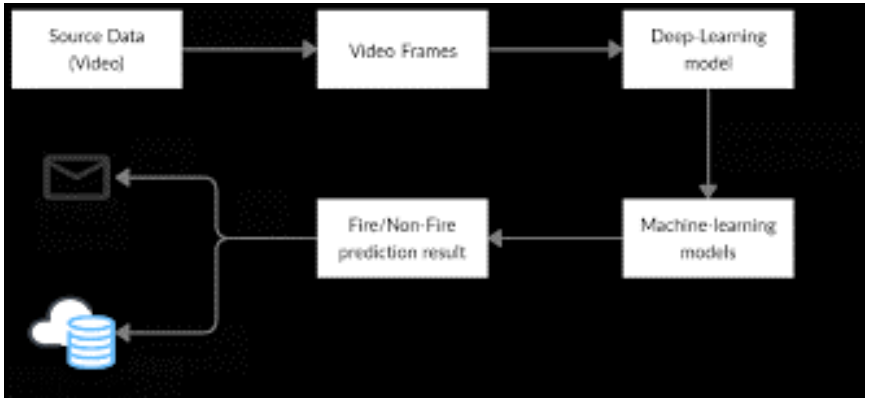

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user uses the console to access the interface.	Python/ open
2.	Application Logic-1	Logic for a process in the application	Java / Python

3.	Camera	Logic for a process in the application	FPV Camera technology
4.	Input	Video Feed	Web Camera/Video on a site
5.	Conversion	Video inputted is converted into Frames	Frame Converter
6.	Cloud Database	The model is trained in the cloud more precise with detections more images can be added later on	IBM Cloud ,Python Flask..
7.	Smoke sensor	Logic for a process in the application	MQZ, etc
8.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	CNN, RNN, caffe2 to form the framework.	CNN, RNN
2.	Security Implementations	Mandatory Access Control (MAC) and Preventative Security Control is used	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc..
3.	Scalable Architecture	3 – tier	Python flask
4.	Availability	Use of load balancing to distribute traffic across servers	IBM load balancer
5.	Performance	Train and test the many requests at a tim.	Online deployment to IBM cloud