

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

Date	03 October 2022
Team ID	PNT2022TMID34045
Project Name	Emerging Methods for Early Detection of Forest Fires
Maximum Marks	4 Marks

**Technical Architecture:**

Video feed frame camera



Frames from video



Deep learning model



No fire detected

Forest fire  
Detected

Alert



**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, JavaScript
2.	Application Logic-1	It takes the back-end business logic input and turns it into the front-end output that the user sees.	Python
3.	Application Logic-2	To train deploy and manage AI for Analyse the information during single integrated environment	IBM Watson STT service
4.	Application Logic-3	Build the conversational interface to many application	IBM Watson Assistant
5.	Database	AI databases integrate artificial intelligence technologies to provide value-added services.	MySQL
6.	Cloud Database	It serves many of the same functions as a traditional database with the added flexibility of cloud computing.	IBM Cloud
7.	File Storage	It can increase the storage capacity and modify the performance to change in work load demands.	IBM Block Storage
8.	External API-1	They are the open door to sensitive data and require a great effort to secure.	IBM Weather API
9.	External API-2	It is in the nature of neural-networks based AI to require massive quantities of data to learn patterns	IBM Weather API

		before it can recognize similar patterns or predict future behavior.	
10.	Machine Learning Model	Deep learning and other techniques to solve actual problems.	Object Recognition Model
11.	Infrastructure (Server / Cloud)	Access data anywhere, with governance and at scale, to infuse AI across your hybrid environment	Local, Cloud Foundry

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	It provide integrated support for testing.	Python flask
2.	Security Implementations	Theano I tool is used for development	Python
3.	Scalable Architecture	It is a critical concept in many engineering disciplines and is crucial to realizing operational AI capabilities.	Python
4.	Availability	It offers the full fledged file editor	Python(IDLE)
5.	Performance	It give better performance	Python(Library functions)