Project Design Phase-II

Technology Architecture

Date	3 nov 2022
Team ID	PNT2022TMID50535
Project Name	Emerging Methods for Early Detection of Forest Fires
Maximum Marks	4 Marks

Technical Architecture:

Title: Emerging Methods for Early Detection of Forest Fire

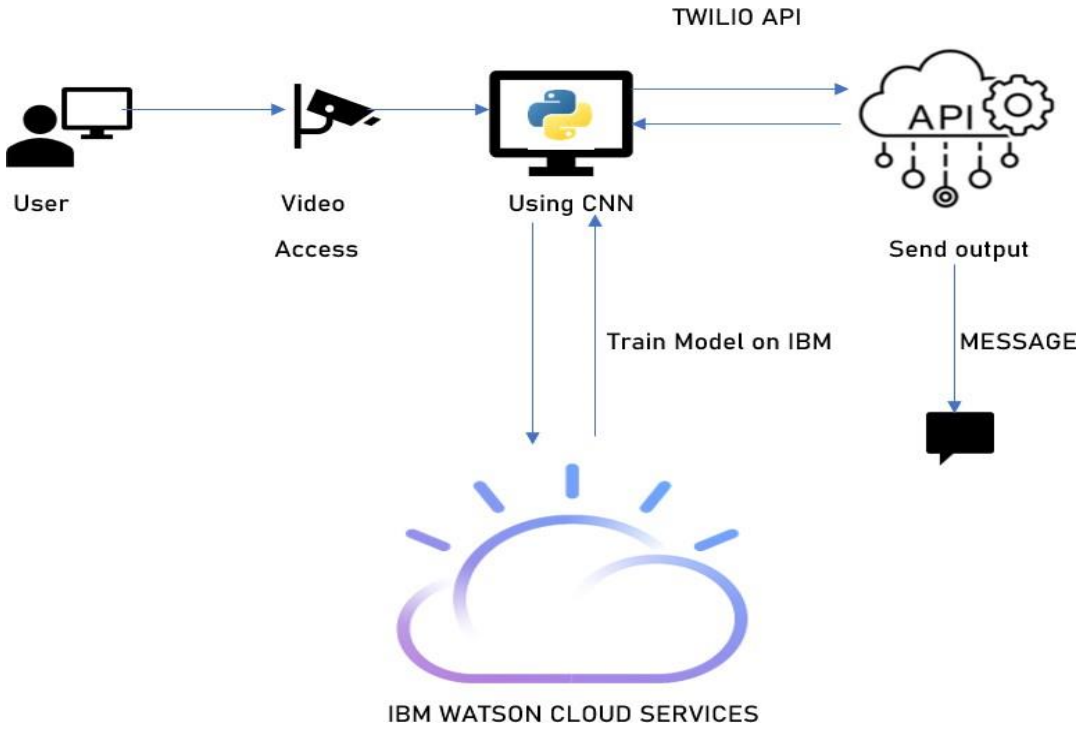

Table-1 : Components & Technologies:

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.	Application Logic	Logic for a process in the application	Java / Python
3.	Video Feed	Extract video by the camera	Surveillance Camera
4.	Image Pre-Processing	To classify millions of feeds which have been extracted	Keras, Numpy
5.	Database	Database Service on Cloud	IBM Cloud Watson
6.	Training & Testing the Model	Training the model continuously to determine the fire	CNN
7.	External API	To alert the user by messages	Twilio API, Open CV

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python open-source frameworks used	Technology of Opensource framework
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	SHA-256, Encryptions, IAM Controls
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Web Services- HTML, CSS, JS Application Services- Python, Anaconda Database Services – IBM DB
4.	Availability	Justify the availability of application	IBM Load Balancer
5.	Performance	Design consideration for the performance of the application	IBM Content Delivery Network