

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

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|----------------------|---|
| Date | 14 November 2022 |
| Team ID | PNT2022TMID03802 |
| Project Name | Emerging method for Early Detection of Forest Fires |
| Maximum Marks | 4 Marks |

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

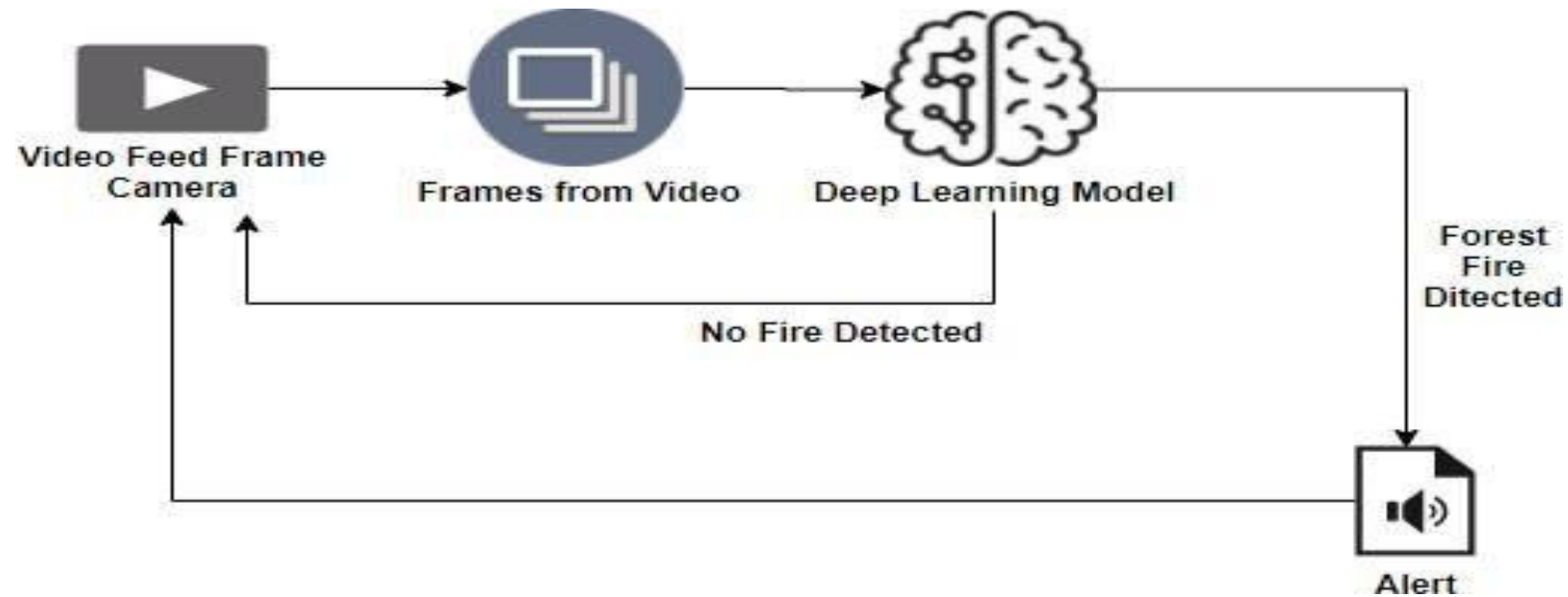


Table-1 : Components & Technologies:

| S.No | Component | Description | Technology |
|------|---------------------------------|---|--|
| 1. | User Interface | How user interacts with application e.g. Mobile App, database system | HTML, CSS, JavaScript / Angular Js / React Js etc. |
| 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. | Smoke sensor | Logic for a process in the application | MQZ, etct |
| 5. | Database | Data Type, Configurations etc. | MySQL, NoSQL, etc. |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloudant etc. |
| 7. | database system | File storage requirements | Other Storage Service or Local Filesystem |
| 8. | Rotary--wing UAV | Purpose of firefighting used in the application | IBM Weather API, etc. |
| 9. | EFixed--wing UAV | Purpose of weather monitoring.used in the application | Aadhar API, etc. |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | Object Recognition Model, etc. |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud Local Server Configuration: | Local, Cloud Foundry, Kubernetes, etc. |

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|--|--|------------------------------|--|
| | | Cloud Server Configuration : | |
|--|--|------------------------------|--|

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|---|---|
| 1. | Open-Source Frameworks | List the open-source frameworks used | Technology of Opensource framework |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | e.g. SHA-256, Encryptions, IAM Controls, OWASP etc. |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Technology used |
| 4. | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | Technology used |
| 5. | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc. | Technology used |