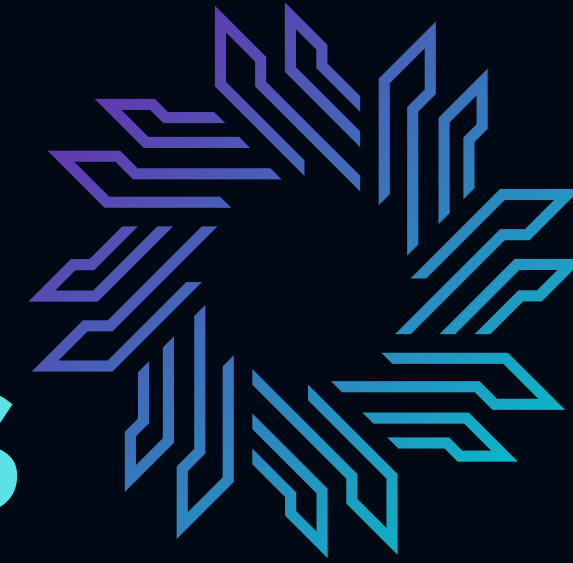
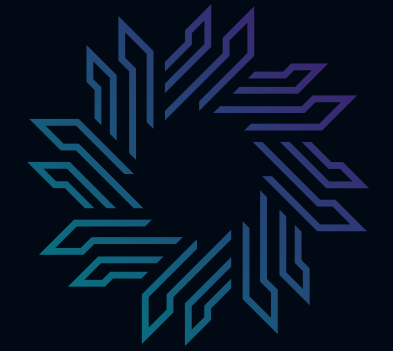


Team

NM_VisionaryTitans

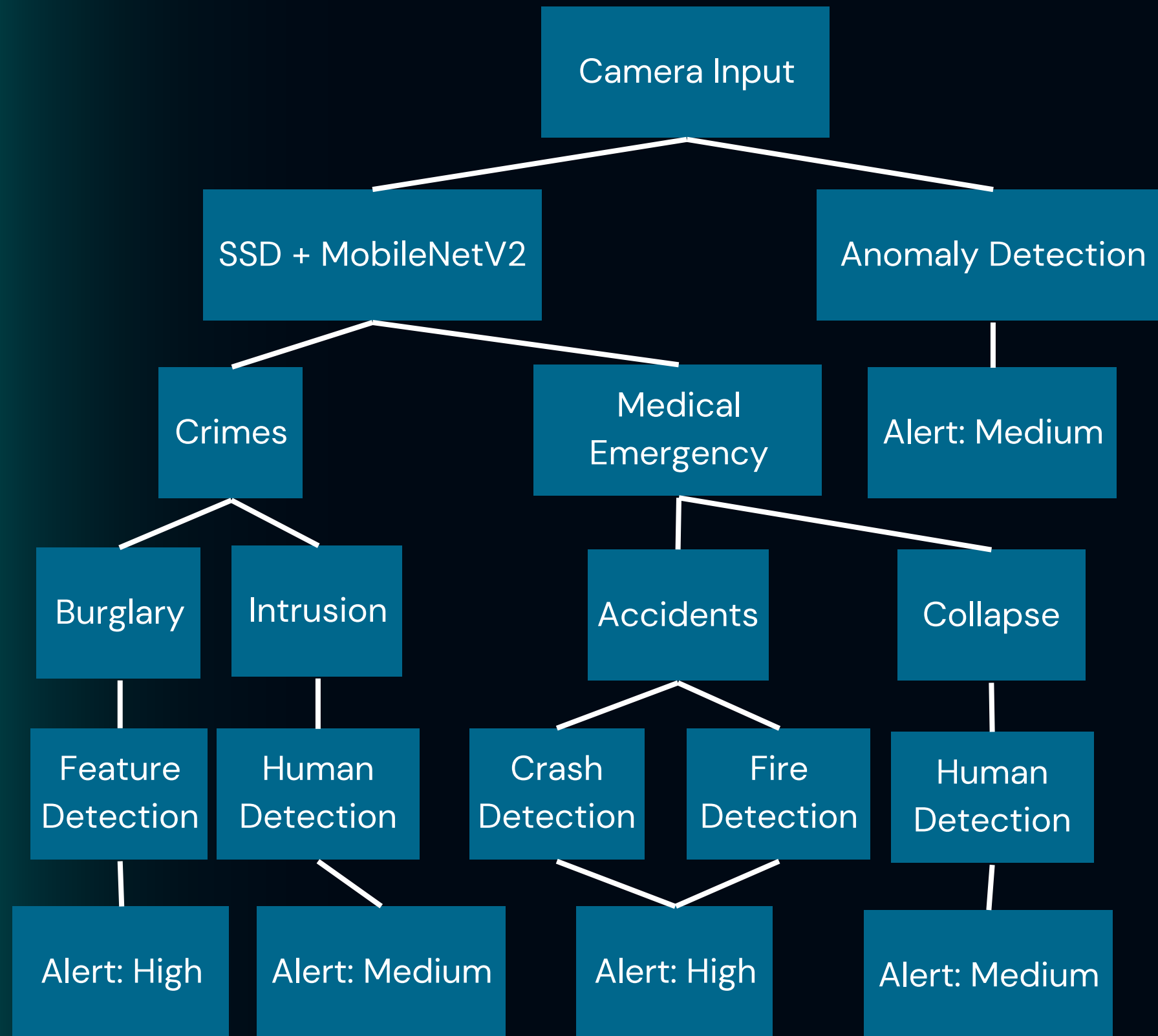


- PSID: KVH-009
- Problem title: Advance CCTV Analytics Solution
- Team Members: 6

Team Lead: Sam Varghese
AIR 6, IITK Tech Innovation



Idea & Approach



Step 1

- Feed the live recording to the program, where ML model will start the frame classification.
- **SSD + MobileNetV2** will perform accurate object detection in real time and with minimal hardware resources
- **Anomaly detection** algo will work simultaneously to detect abnormal situations.

Step 2

- If it's not an anomaly, the ML model will detect crimes and medical emergency situations in the frame. **Decision Trees** will be used.

Step 3

- Once the ML model detects any medical/crime-related incident, it **stores the incident details** like time, venue, alert type, incident type, etc, which will be used for analytics.
- The model will also **start tracking thieves** in case of burglary, and **select appropriate hospitals** to send alerts for immediate medical services urgently in case of medical emergencies.
- In the case of fire, it will also **try to figure out the cause of it**, automatically through deep learning.

● Business Potential ●

1

- This system can be used for **retail stores' security** as well.
- A subscription-based system can be implemented on the application for enhance revenue.

2

- **Insurance companies** can utilize it to monitor traffic incidents.
- This will reduce fraud and improve the claim process.

3

- **Collaboration** between different hospitals, legal staff, etc can be made to provide urgent medical, and legal assistance to victims.
- This collaboration can again pave way for a new business model.

Tech Stack



Python



Tensorflow



AWS EC2



MySQL



GitHub



Twilio



Dependencies

- Access to live CCTV footage.
- EC2 instance on AWS to perform classification.
- Twilio connection for the alert system.
- MySQL database setup, along with Python installed.

● Our Team ●



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