

SMART INDIA HACKATHON 2024



TITLE PAGE

- **Problem Statement ID – 1605**
- **Problem Statement Title- Women Safety Analytics – Protecting Women from safety threats**
- **Theme- Ensuring the safety and security of women in various aspects of life.**
- **PS Category- Software**
- **Team ID- Safetrek**
- **Team Name (Registered on portal)**



Safetrek

Idea/Approach Details



Proposed Solution:

The Women Safety Analytics software app uses **real-time monitoring** and advanced analytics to **detect potential threats** and create safer environments for women.

- Provides real-time monitoring and alerts to enhance women's safety.
- Offers **data-driven insights** for strategic planning of public safety.
- Allows law enforcement to intervene early, preventing situations from escalating
- Combines **person detection**, **gender classification**, and **gesture analytics** in one comprehensive system.
- Uses continuous analysis to identify potential threats before they become incidents.

Technical Approach



Technologies to be used:

- ❖ Programming Languages: Python, JavaScript
- ❖ Frameworks: TensorFlow, OpenCV, React Native
- ❖ Hardware: Cameras, IoT devices for real-time data collection

Methodology and process for implementation:

- **Person detection** and **gender classification** using machine learning models.
- Gesture recognition to detect **SOS** situations.
- Continuous monitoring and analysis to generate alerts for potential threats.
- The system gathers data on incident patterns over time to **optimize camera placement** and **police deployment** for enhanced city safety.



Feasibility and Viability



Feasibility Analysis:

- The tools and systems we need to use are compatible with the computers and devices we have today.
- Can be integrated with existing city **surveillance infrastructure**.

Potential Challenges and Risks:

- Data privacy concerns.
- False positives/negatives in threat detection.

Strategies for overcoming challenges:

- Implement strong **data encryption** and **anonymization techniques**.
- Continuous **model training** and **refinement** to improve detection accuracy

Impact and Benefits



Potential Impact:

- Significantly enhances public safety for women in cities.
- Provides law enforcement with **actionable insights**.

Benefits:

- Social: Reduces crimes against women.
- Economic: Decreases the cost of **crime prevention** and **intervention**.
- Environmental: Encourages safe public spaces, leading to more community engagement.

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Reasearch and References



- Details / Links of the reference and research work