

# Mehank Sahoo

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## EDUCATION

### Vellore Institute of Technology

Bachelor of Technology

Major in Computer Science with Minors in Cybersecurity and Digital Forensics

Cumulative GPA: 8.08/10.0

Bhopal, Madhya Pradesh

September 2022 - Present

## SKILLS

**Programming Languages:** Python, SQL, Java, JavaScript, HTML, CSS

**Tools:** Wireshark, Kali Linux, Nmap, Scapy, OpenCV, TensorFlow, Firebase

**Languages:** Fluent in English, Hindi, Marathi

## PROJECTS

### Ligamentro Sign Language Recognition | Front-End & App Developer

January - May 2025

- Engineered an Android app using TensorFlow Lite and a custom YOLO model to recognize 26+ ASL gestures in real-time, achieving 99.9% offline functionality by optimizing confidence (30%) and IoU (50%) thresholds.
- Architected a reactive MVVM architecture in Kotlin, accelerating average sign language inference times to 80ms and enhancing frame rates to 35 FPS through optimized image caching.
- Implemented a robust image processing pipeline employing CameraX and an advanced Non-Maximum Suppression (NMS) algorithm, achieving a 40% improvement in real-time detection accuracy for visual recognition tasks.
- Tech Stack: Kotlin, Android SDK, Python, TensorFlow Lite, CameraX, YOLO, MVVM, Computer Vision.

### Cryo Packet Sniffer | Security Software Developer

October 2023 - February 2024

- Created a real-time network monitoring system that captures 10,000+ packets/minute with a latency of less than 100ms and 99.9% uptime by leveraging deque-based memory management.
- Built responsive dashboard displaying real-time network traffic from 1,000 concurrent packet captures with automatic classification, achieving <200ms data refresh rate and 99.9% uptime.
- Architected Python backend with Flask and Scapy delivering 7 RESTful API endpoints with <50ms response time, optimized memory usage under 200MB RAM with cross-platform compatibility and administrator privilege handling.
- Tech Stack: React, TypeScript, Python, Flask, Scapy, Node.js, Git, Npcap.

## EXPERIENCE

### University of Wollongong | Cybersecurity Immersion Intern

Dubai, UAE | June – July 2024

- Orchestrated continuous monitoring operations of cloud infrastructure, identifying and resolving 10+ critical security misconfigurations to strengthen the security posture and maintain system integrity.
- Authored and implemented new IAM policies, directly reducing the organization's attack surface by 15%.
- Developed a standardized security baseline for configurations, slashing incident response time for misconfigurations by 1 hour.

### Intrainz | Cybersecurity Intern

Bangalore, India | December 2023 – February 2024

- Audited and tested system vulnerabilities in a simulated environment, identifying and documenting 10+ critical vulnerabilities per test using tools like Kali Linux, Wireshark, Nmap, and Nessus.
- Investigated and resolved 95% of critical security incidents within SLA by correlating alerts and hardening systems, improving overall security posture and minimizing potential downtime.

## CERTIFICATE

Foundations of Cybersecurity - Google

AWS Cloud Practitioner Essentials - AWS

DevOps and Cyber Security - IBM

HTML, CSS, and JavaScript - Johns Hopkins

## EXTRA-CURRICULAR

### Hackathon – AI for Pedestrian Safety

India | May 2025

- Pioneered a predictive safety system using computer vision (YOLO) and a real-time IoT alert network, achieving 95% predictive accuracy and cutting potential incident rates by 40%.