#### Ayush Raj

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#### **EDUCATION**

### Vellore Institute of Technology, Chennai

B.Tech in Computer Science (AI & Robotics) | GPA: 8.76 | Sept 2022 - Jul 2026

Himalayan Public School, Patna | Intermediate – PCM & CS | 86% | Apr 2020 - May 2021

St Karen's High School, Patna | Matriculation (CBSE) | 94%

#### **SKILLS**

Programming: C, C++, Java, Python, MATLAB, Dart

Web & App Development: HTML, CSS, JavaScript, TypeScript, Flutter

**Databases:** SQL (Oracle, MySQL), MongoDB **ML & AI:** Python (TensorFlow, PyTorch, TFLite)

Embedded Systems & Robotics: Arduino, ESP32, LT Spice, Proteus, TINKERCAD

Tools: VS Code, Android Studio, Xcode, Arduino IDE

Soft Skills: Teamwork, Problem-Solving, Leadership, Communication

#### **PROJECTS**

#### AWS-Based Fraud Detection System (Nov 2024 - Dec 2024)

- Built an Al-powered fraud detection model with AWS services (S3, Lambda, SageMaker).
- Developed an Al-powered fraud detection system using AWS cloud services for real-time financial transaction monitoring.

# AI-Powered Sign Language Conversion System (Sept 2024 - Dec 2024)

- Developed an ML-based system for real-time sign language-to-speech conversion.
- Integrated ESP32S microcontroller for hardware implementation.

## IoT-Based Weather Monitoring System for smart agriculture (Nov 2023 - Dec 2023)

Built an ML-driven weather monitoring system using ESP32S microcontroller, servomotors , sensors.

### Emotion Detection Robot (Apr 2023 - Jul 2023)

• Designed a robotic assistant for emotion detection using AI and speech-to-text.

## Parallel Computing Library Management System (Feb 2023 - Apr 2023)

• Optimized database queries with parallel computing, reducing execution time by 40%.

## Al-Powered Search Engine for DSA (Sept 2023 - Dec 2023)

• Created a chatbot-based search engine for DSA queries with React and Selenium.

# ML-Based Antivirus Software (Nov 2022 - Dec 2022)

• Trained an ML model on 1,000+ virus samples for malware detection.

# **EXTRACURRICULAR ACTIVITIES**

## FFCS Member | NSS, VIT Chennai (Aug 2023 - Present)

- Led and participated in social initiatives like beach cleaning, orphanage visits, STEM teaching, and health camps.
- Developed leadership, teamwork, and social responsibility skills.