

Ibrahim Azeem Mohammed

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EDUCATION

Bachelor of Technology in Electronics and Communication Engineering (VLSI), National Institute of Technology (NIT), Warangal
Cumulative GPA: 7.47
Expected May 2027

SKILLS

Languages	Python, C++, SQL, Bash, HTML, CSS
AI & Agents	RAG, LLMs, Multi-Agent Systems, YOLOv8, OpenCV
Cloud & Infrastructure	AWS, Docker, Kubernetes, Container Orchestration, Microservices, Linux (Ubuntu)
Systems & Engineering	Embedded C, Google ADK, CI/CD, Git, Agile, Clean Code, Computer Architecture

EXPERIENCE

Research Intern May 2025 - July 2025
King Fahd University of Petroleum and Minerals (KFUPM) *Dhahran, Saudi Arabia*

- Developed an asynchronous Python pipeline for hyperspectral datasets, reducing runtime exceptions by 30%.
- Designed a cross-platform GUI for data ingestion thereby increasing throughput by 15%.
- Built image validation testing suites for hardware-software modules to verify real-time interface stability.

PROJECTS

Brother: Smart Voice-Activated Task Scheduler | *Agent Enabled Scheduler* [Git Link](#) Oct 2025 - Nov 2025

- Developed a voice-activated task scheduling system using Python to automate and optimize daily routine management.
- Integrated the Google Agent Development Kit (ADK) to process natural language voice commands and execute dynamic task prioritization using ASAP, ALAP and other Heuristics.
- Engineered a persistent local database using SQLite to track multi-phase project roadmaps and maintain task execution logs.

Drishti OS (Open-Source Contributor) | *Drishti OS* [GitHub](#) May 2026 - Present

- Authored clean, scalable code for this open - source repository to deploy multi-task deep learning pipelines on Linux systems using YOLOv8, ArcFace, and OCR.
- Applied strong problem solving skills to train a custom weapon detection model that achieves 95% mAP50 under varied lighting conditions.
- Engineered and optimized the inference pipeline to cut per-frame latency from 300ms to 150ms and cap memory usage at 2GB RAM on restricted hardware.

Automatic Luggage Carrier | *Automatic Luggage*

- Programmed C++ firmware on an ESP32 to track users via IR and ultrasonic sensors for hands-free transit.
- Added GPS tracking and Bluetooth app control for remote navigation and anti-theft monitoring.
- Coded real-time obstacle detection algorithms to ensure safe movement across varied environments.

EXTRA-CURRICULAR ACTIVITIES

- Student Coordinator**, NIT Warangal: Managed global academic communications and collaborations.
- Active Member**, GDG: Competed in decentralized AI agent computing research challenges.
- Open-Source Contributor**, GSSoC: Merged clean code across multiple open-source repositories.

LEADERSHIP

- Joint Secretary (Embedded Vertical)** — Robotics Club, NIT Warangal: Supervised hardware design sprints and embedded software development tutorials for undergraduates.
- Secretary of Events** — IEEE Student Branch, NIT Warangal: Organized technical symposia focusing on emerging trends in electronics and compute infrastructure.