Kaushika

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EDUCATION

Vellore Institute of Technology — Bhopal, Madhya Pradesh
Bachelor of Technology — Sep 2022 - Present
Major in Computer Science with Minors in Cloud Automation — Expected: 2026
Cumulative GPA: 8.6/10.0

SKILLS

Programming: Python, SQL, Java, JavaScript
AI/ML & Data Engineering: TensorFlow, Scikit-learn, OpenCV, Predictive Modeling, LLMs, Agentic AI, YOLOv3
Cloud & DevOps: GCP (Compute Engine, Vertex AI, Cloud Functions), AWS, ETL Pipelines, Firebase
Soft Skills: Technical Leadership, Cross-Functional Collaboration, Entrepreneurial Mindset

PROJECT EXPERIENCE

Sign Language Recognition AI | ML + Full-Stack Developer — Jan 2025 – May 2025
- Developed a cross-platform solution using OpenCV (Python) for real-time gesture capture and TensorFlow for interpretation, achieving 91.4% test accuracy on dataset as well as enabling real-time translation via mobile/web cameras.
- Deployed scalable React.js/Flutter frontend with WebRTC integration, serving 500+ monthly active users.
- Enhanced accessibility by processing 9/10 signs correctly in real-world tests with hearing-impaired beta users.
- Tech Stack: Python, OpenCV, TensorFlow, CNN-LSTM, React.js, Flutter, WebRTC, Firebase

Autonomous Object-Transport Robot | Computer Vision Engineer — Jun 2024 – Jul 2024
- Engineered an award-winning autonomous robot in a 2-person team; architected the AI vision and control systems that mastered 5+ movement functions.
- Pioneered the robot's core AI vision system using YOLOv3 and TensorFlow Lite (Python), enabling real-time object detection and autonomous manipulation to win 1st place against 25 international teams.
- Tech Stack: Python, ROS, OpenCV, TensorFlow Lite, YOLOv3, Arduino (RF remote), CNN-LSTM

AI-Powered Recommendation System | Data Analyst — Jul 2023 – Feb 2024
- Designed and implemented a collaborative filtering model in Python (TensorFlow, Pandas) that personalized user content, increasing key engagement metrics by 25%.
- Automated the ETL pipeline on GCP to process user data, reducing latency by 40% and ensuring real-time accuracy.
- Tech Stack: Python, TensorFlow, SQL, GCP (Compute Engine, Cloud Functions), Pandas

WORK EXPERIENCE

India Space Lab | Space Tech X Intern — Dec 2024 – Jan 2025
- Architected and tested a hybrid-electric drone propulsion system, improving energy efficiency by 15% using GCP's Compute Engine for large-scale battery performance simulations (50+ iterations).
- Spearheaded a cost-modeling framework for AI-driven drone swarms using GCP's Vertex AI, reducing projected mission costs by 30%. Proposal presented to ISRO's RLV directors, who approved further funding for prototyping.

University of Wollongong Dubai | AI & ML Intern — Jun 2024 – Jul 2024
- Boosted robot operational efficiency by 22% via path and torque optimization, while slashing critical errors by 35% through real-time cybersecurity protocols.
- Fabricated a decision-making framework to analyze performance-security trade-offs, enabling optimal protocol selection for peak system reliability.

ACHIEVEMENTS

The National Highways Authority of India (NHAI) Hackathon 2025 — India 2025
- Achieved Top 5 by developing an AI-powered Foot Over Bridge detection system, prioritizing "Safety before luxury" to enhance pedestrian safety.

1st Place, International Robotics Competition | UOWD — Dubai 2024
- Outperformed 25 teams in an object-transport challenge, showcasing hands-on AI/ML implementation and computer vision expertise.

National Art Champion | Gulf National Contest — Dubai 2018
- Awarded 1st place among 200+ participants in a 30-minute live competition, judged on creativity under time constraints.

CERTIFICATIONS & TRAINING

- AWS Cloud Practitioner Essentials – Amazon Web Services
- DevOps Fundamentals and Cyber Security Analyst – IBM
- HTML, CSS & JavaScript – The Johns Hopkins University