Kaushika

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EDUCATION

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

SKILLS

Programming: Python (Proficient), SQL, Java, JavaScript
Machine Learning: TensorFlow, Scikit-learn, OpenCV
Front-End: React, HTML, CSS
Soft Skills: Technical Leadership, Cross-Functional Collaboration, Entrepreneurial Mindset

PROJECTS

Sign Language Recognition AI | Machine Learning + Full Stack   January – 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   June – July 2024
- Engineered an award-winning autonomous robot in a 2-person team; the AI vision and control systems that mastered 5+ movement functions to win 1st place against 25 teams in an international object-transport race.
- Tech Stack: Python, ROS, OpenCV, TensorFlow Lite, YOLOv3, Arduino (RF remote)

AI-Powered Recommendation System | Data Analyst   July 2023 – February 2024
- Built and implemented a collaborative filtering model, increasing user engagement by 25% through personalized content recommendations.
- Automated ETL pipelines on GCP (Compute Engine, Cloud Functions) to process user interaction data, reducing data processing time by 40% and ensuring real-time model accuracy.
- Tech Stack: Python, TensorFlow, SQL, GCP, Pandas

WORK EXPERIENCE

India Space Lab | Space Tech X Intern   December 2024 – January 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).
- Pioneered 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   June – July 2024
- Boosted robot operational efficiency by 22% via path and torque optimization, while slashing critical errors by 35% through real-time cybersecurity protocols.
- Designed a decision-making framework to analyze performance-security trade-offs, enabling optimal protocol selection for peak system reliability.

ACHIEVEMENTS

Top 5, The National Highways Authority of India (NHAI) Hackathon 2025   India 2025
- Achieved and developed an AI-powered Foot Over Bridge detection system 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.

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

LANGUAGES

English, Hindi