Dheeraj N

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EDUCATION

Global Academy of Technology   2021 – Present
Bachelor of Technology in Artificial Intelligence and Machine Learning   *CGPA: 8.53*

Vidya Mandir Ind PU College   2019 – 2021
Pre-University Course, Karnataka PUC - Computers   *CGPA: 7.5*

EXPERIENCE

Full-Stack Development Intern   Jan 2025 – Jun 2025
DigiMogo
- Developed and deployed a scalable **CRM SaaS platform** to streamline client lifecycle management and enhance team productivity across departments.
- Built an internal **webpage builder** using **React.js** and **RESTful APIs** that enabled cross-functional teams to update the Articles page dynamically via a database-backed interface.
- Led the **end-to-end deployment** of two production-ready web portals and optimized structure and performance to enhance user accessibility and contribute to improved **SEO visibility**.
- Implemented responsive and accessible UIs using **React.js**, **Bulma**, and modern **CSS**, improving mobile experience and user engagement.

Machine Learning Intern   Oct 2024 – Nov 2024
Hindustan Aeronautics Limited (HAL)
- Engineered an AI-driven **gaze detection system** to enhance **cockpit safety** by enabling **hands-free control** of avionics.
- Developed and integrated **blink detection algorithms** for seamless pilot interaction with on-screen cockpit elements.
- Collaborated with industry experts to refine the system for **real-world deployment** in aviation.

PROJECTS

EchoSight | *YOLO, OpenCV, Face Recognition, TTS, Arduino IDE, ESP32, NodeMCU*   Present
- Developed an **AI-powered assistive device** that provides real-time **audio descriptions** for visually impaired users.
- Integrated **YOLO** for object detection, **facial recognition** for user identification, and **text-to-speech (TTS)** for verbal feedback.
- Collaborated with hardware teams to build a system using **ESP32, NodeMCU,** and **ultrasonic sensors** for enhanced environment perception.

ASL Hand Sign Recognition | *Python, OpenCV, MediaPipe, TensorFlow, CNN*   2024
- Developed a **CNN-based deep learning model** for real-time American Sign Language (ASL) gesture recognition.
- Built and labeled a **custom dataset** with 30+ hand gestures, improving model robustness and accuracy.
- Integrated **OpenCV** and **MediaPipe** for efficient **hand tracking** and gesture recognition, enhancing real-time performance.

Eye Tracking Assisted Control System | *OpenCV, MediaPipe, PyAutoGUI*   2024
- Developed an **AI-powered hands-free system** using **eye-tracking** and **blink detection**.
- Implemented **facial landmark detection** for accurate **gaze monitoring** and user intent recognition.
- Designed a **real-time interface** to track **eye movements** and control the cursor.

TECHNICAL SKILLS

Programming Languages: Python, C, JavaScript, SQL
Machine Learning & AI: Deep Learning, Computer Vision, NLP, Reinforcement Learning, CNNs, RNNs, LSTMs, Transformer Models
Frameworks & Libraries: TensorFlow, PyTorch, Keras, OpenCV, Scikit-Learn, LangChain
Web Development: React.js, Next.js, Node.js, Flask, Bulma, Tailwind CSS
Developer Tools: Git, VS Code, PyCharm, Jupyter Notebook, Arduino IDE