Alamanda Balu Karthik

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Summary

- Software Developer | Computer Science Engineering | Full-Stack Development | C | C++ |Python
- Computer Science undergraduate with expertise in software development, full-stack development, frameworks. Proficient in Python, C/C++, Java and JavaScript with hands-on experience, RESTful APIs, and database management. Skilled in object-oriented programming, data structures, and software testing. Seeking to leverage technical skills and problem-solving abilities to contribute to innovative software solutions.

Education

Anil Neerukonda Institute of Technology and Sciences, B.Tech in Computer Science Engineering(CSE) — December 2021 – May 2025

- GPA: 8.34/10.0

Sasi Junior College, Intermediate Education (MPC) — June 2019 – May 2021

- Score: 956/1000

Sasi English Medium High School, Matriculation — June 2018 – May 2019

- GPA: 9.7/10.0

Experience

Java Full Stack Developer Intern, Rastriya Ispat Nigam Limited (RINL) (VSP) — May 2024 – June 2024

- Enhanced proficiency in web technologies and Java through hands-on projects and mentorship.
- Collaborated with team members to develop a website where we can manage the delays
- Acquired practical knowledge how to use NetBeans and Java servlets using Java
- Gained insights into steel plant operations and applied technical skills in a real-world environment

Projects

Artificial Intelligent (AI) Agent — github.com

- Tools used: Browser use web UI, Browser Automation, Gemini API, AI integration, Natural Language Processing
- Developed an innovative AI Agent leveraging the Gemini API to implement browser-based automation, enhancing operational efficiency by 30
- Optimized AI-driven workflows by incorporating advanced API functionalities, achieving a 40accuracy and performance.
- Designed and deployed a user-centric automation tool, streamlining processes and earning recognition for technical creativity and innovation.
- Collaborating with cutting-edge AI technologies to build a robust agent, boosting productivity, and demonstrating strong problem-solving skills and development expertise.

Drowsiness Detection System — github.com

- Tools used: Deep Learning, OpenCV, Keras, Python, TensorFlow, Pygame
- Developed a real-time drowsiness detection system using Python, OpenCV, and Keras, leveraging Convolutional Neural Networks (CNN) to classify eye states, enhancing driver safety by detecting fatigue with 85performance.
- Designed and implemented a computer vision pipeline for face and eye detection, processing 7000+ custom dataset images, reducing false positives by 20
- Engineered an end-to-end safety solution integrating real-time image processing and TensorFlow-backed models, automating drowsiness alerts and cutting response time by 3 seconds critical for accident prevention.

- **Full-Stack Proficiency**: "Developed a small-scale AI-powered web application, integrating a responsive React.js frontend with a Node.js/Express backend, showcasing end-to-end development skills for efficient, user-focused solutions."
- **AI Integration**: "Embedded a lightweight machine learning model (e.g., Python/Scikit-learn) to deliver smart features like data predictions, demonstrating practical expertise in AI-driven functionality."
- **API & Database Efficiency**: "Created RESTful APIs and managed data with a compact database (e.g., MongoDB/SQLite), ensuring seamless connectivity and performance across frontend, backend, and AI components."

Technologies

Languages: : Python, C, C++, JavaScript, SQL, HTML, CSS

Technologies: Node.js, Express.js, React.js, Git, GitHub, Net Beans

Core: Data Structures and Algorithms, Object-Oriented Programming, Database Management Systems, Computer Networks, Software Testing

Soft Skills

Strong leadership, team collaboration, problem solving, effective communication, quick learner

Certifications

Harward CS50's Introduction to Computer Science, EDX	August 2024
Harward CS50's Introduction to Artificial Intelligence with Python, EDX	September 2024
Python for Data Science, NPTEL	February 2024
Introduction to Internet of Things (IoT), NPTEL	December 2024
Python Essentials -1,2, CISCO	May 2024
Introduction to Prompt Engineering, EDX(IBM)	July 2024
SQL and Relational Databases 101(IBM)	July 2024

Workshops

A 3-Day Workshop on "Model Smart IoT Systems using Arduino and AI Bootcamp on Artificial Intelligence and IoT".

- Tools used: Deep Learning, OpenCV, Keras, Python, TensorFlow, Pygame
- Practical Skills in IoT and AI: Gained hands-on experience in designing and implementing smart IoT systems, utilizing AI algorithms for effective data processing and autonomous decision-making.
- Innovative Solution Development: Equipped with the knowledge to create innovative solutions that enhance automation and connectivity across various applications, demonstrating a commitment to advancing expertise in AI and IoT.
- Preparation for Future Challenges: The certification reflects readiness to tackle future challenges in the rapidly evolving technology landscape, emphasizing a proactive approach to continuous learning and adaptation.