

Yashwanth Raj Tirupati

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SUMMARY

Full-stack software engineer with 2+ years of experience building and deploying AI-driven features. Proven ability to design and implement robust backend systems using Python and modern front-end frameworks (React, TypeScript). Expertise in optimizing on-device performance and improving model accuracy. Eager to leverage AI/ML skills in a fast-paced, product-focused environment.

EDUCATION

University of Dayton

M.S. in Computer Science

Dayton, Ohio, USA

Aug 2023 - May 2025

- **Concentrations:** Autonomous Systems and Data Science
- **GPA:** 3.41/4.00
- **Related Coursework:** Data Structures & Algorithms, Objects & Design, Virtual Reality, Machine Learning, Artificial Intelligence, Object-Oriented Programming, Algorithm Design, Advanced Computer Vision.

Jawaharlal Nehru Technological University

B.Tech. in Computer Science & Engineering

Hyderabad, Telangana, India

June 2018 - July 2022

- **CGPA:** 7.3/10.00
- **Related Coursework:** Operating Systems, Database Management Systems, Computer Networks, Discrete Mathematics, Web Technologies, Software Engineering.

EXPERIENCE

Cognizant Technology Solutions

Software Developer

Chennai, Tamil Nadu, India

March 2023 - Aug 2023

- Developed and deployed full-stack features for enterprise systems using Spring Boot (Java) and modern front-end frameworks, resulting in 15% faster API response times.
- Collaborated with product stakeholders to translate user requirements into technical specifications within an Agile environment, delivering robust, high-quality code.

Cognizant Technology Solutions

Programmer Analyst Intern

Chennai, Tamil Nadu, India

March 2022-Sept 2022

- Identified and fixed bugs in enterprise applications, reducing reported issues by 10% for key modules.
- Improved code quality and reliability by authoring technical documentation and enhancing test automation.

PROJECTS

AI-Powered Workflow Automation Tool

Jan 2024-May 2025

- Developed a full-stack application using Python (FastAPI backend), React, and TypeScript frontend to automate a key workflow, resulting in a 20% increase in user efficiency.
- Integrated an LLM-based natural language processing component to enhance user interaction, improving task completion time by 15%.

Real-time Hand Tracking & Gesture Recognition for AR

Jan 2024-May 2025

- Developed a C++ and PyTorch deep learning model for high-fidelity hand tracking, achieving 98.5% accuracy on a dataset of 50 complex gestures.
- Optimized the model for on-device performance, reducing latency by 30% to enable 90 FPS performance.

Data Processing Pipeline with ETL

Sep 2023-Dec 2023

- Designed and implemented an ETL pipeline using Python to process and transform large datasets for a machine learning model, increasing data processing speed by 3x.
- Utilized PostgreSQL for data storage and Docker for containerization, improving data reliability and scalability.

ACTIVITIES AND LEADERSHIP

University of Dayton

- Teaching Assistant, CPS 501 (Advanced Programming and Data Structures)
- Secretary, Indian Student Association (100+ members)

Dayton, Ohio, USA

Jan 2024-Apr 2024

Aug 2023-Apr 2024

SKILLS

Languages: Python, Java, C++, C, JavaScript, Kotlin

Frontend: HTML, CSS, ReactJS, AJAX

Backend Frameworks: SpringBoot, NodeJS

Database: MySQL, MongoDB, Postgres

Automation: Appium, Selenium, Cucumber BDD, Jenkins, JUnit

AI & ML: PyTorch, TensorFlow, Jupyter, OpenCV, LLMs(GPT)