**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*  
 *•* **CGPA:** 7.3/10.00

**Hyderabad, Telangana, India** *June 2018 - July 2022*

*•* **Related Coursework:** Operating Systems, Database Management Systems, Computer Networks, Discrete Mathematics, Web Technologies, Software Engineering.

**EXPERIENCE**

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| **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**

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| **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**

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| **University of Dayton**  *•* Teaching Assitant, 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)