

# Yashwanth Raj Tirupati

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## SUMMARY

Results-driven Software Engineer with an M.S. in Computer Science and expertise in developing and deploying high-quality, maintainable software. Proficient in Java, Python, and C++, with experience in Spring Boot, PyTorch, and Agile methodologies. Adept at optimizing code for performance and collaborating effectively within diverse teams.

## 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 5 full-stack features for enterprise systems using Spring Boot (Java) and modern front-end frameworks, resulting in extensible and maintainable code.
- Collaborated with stakeholders to translate user requirements into technical specifications within an Agile environment, improving API response times by 15%.

### Cognizant Technology Solutions

*Programmer Analyst Intern*

**Chennai, Tamil Nadu, India**

*March 2022-Sep 2022*

- Identified and resolved 100+ bugs in enterprise applications, resulting in a 10% reduction in reported issues for critical modules.
- Improved code quality and reliability by authoring technical documentation and augmenting test automation.

## PROJECTS

### Real-time Hand Tracking & Gesture Recognition for AR

*Jan 2024-May 2025*

- Developed a deep learning model (C++, PyTorch) for high-fidelity hand tracking in a simulated AR environment, achieving 98.5% accuracy on a dataset of 50 complex gestures.
- Engineered a lightweight architecture with data augmentation, reducing latency by 30% and increasing model robustness by 25% for 90 FPS on-device performance.

### Enterprise-Level Software System Enhancement

*Jun 2024 - Present*

- Improved the performance of a critical enterprise system by refactoring core components, resulting in a 20% reduction in processing time and a 15% decrease in resource consumption.
- Implemented a new monitoring system that reduced error rates by 10% and facilitated proactive issue resolution.

### Automated Code Quality Improvement System

*Sep 2023-Dec 2023*

- Developed an automated code review system that identified and flagged 80% of common code quality issues, saving 10 hours per week in manual review time.
- Integrated this system into the CI/CD pipeline, improving overall code quality and reducing bug occurrences by 5%.

## 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)