

Yashwanth Raj Tirupati

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SUMMARY

Highly analytical System Software Engineer adept at debugging and troubleshooting system software anomalies, classifying issues (hardware, software, user error), and determining optimal resolution strategies (fix, escalation, monitoring). Proven experience developing Qt (C++) and QML tools for manufacturing and field support, coupled with expertise in automated software testing (unit and functional test automation). Strong OOP (C++) skills and meticulous attention to detail.

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, emphasizing maintainable, high-quality 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

- Improved enterprise application stability by identifying and resolving 10% of reported bugs in key modules.
- Enhanced code quality and reliability through technical documentation and improved test automation.

PROJECTS

Automated Software Testing Framework for Manufacturing

Jan 2024-May 2025

- Developed a Qt (C++) based automated testing framework for manufacturing processes, resulting in a 20% reduction in testing time and a 15% increase in defect detection.
- Implemented unit and functional test automation (Squish) to improve software quality and reduce manual testing efforts.

Troubleshooting and Diagnostics Tool for Field Support

Jun 2024 - Present

- Designed and implemented a Qt (C++) and QML based diagnostic tool for field technicians, reducing average troubleshooting time by 30% and improving first-call resolution rates.
- Integrated the tool with existing systems to provide real-time data analysis and remote support capabilities.

System Anomaly Classification and Resolution System

Sep 2023-Dec 2023

- Developed a system to classify and categorize system anomalies reported by devices, achieving 95% accuracy in identifying the root cause (hardware, software, user error).
- Implemented automated resolution procedures for common issues, reducing manual intervention by 40%.

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)