

# AJITH CHOWDARY NUTHALAPATI

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## PROFESSIONAL SUMMARY

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Software Engineer with hands-on experience in embedded systems, debugging, and customer-facing technical support. Skilled in C/C++, Python, and Embedded Linux, with a proven ability to resolve complex technical issues and enhance system performance. Adept at collaborating with cross-functional teams and supporting enterprise clients through product development and commercialization.

## PROFESSIONAL EXPERIENCE

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### Glenysys Technologies Inc

Software Engineer

Aurora, IL, USA

August 2023 - Present

- Provided technical guidance to enterprise customers, resolving software and hardware issues related to embedded systems and ensuring seamless product evaluation and adoption.
- Collaborated with clients to understand design requirements, delivered training sessions, and published documentation to support product commercialization.
- Developed and optimized software solutions for embedded platforms, enhancing compatibility and performance across diverse hardware systems.
- Debugged and triaged application issues using tools like GDB and WinDbg in Windows 11 environments, reducing system error rates by 20%.
- Worked with Windows OS, utilizing command-line tools like PowerShell to streamline debugging and customer support workflows.

### Iowa State University

Graduate Teaching Assistant

Ames, IA, USA

August 2022 - December 2022

- Mentored over 20 students in C programming and database concepts, designing exercises with data structures and algorithms to boost problem-solving skills by 30%.
- Provided detailed code reviews, leveraging debugging techniques to improve code quality for 90% of students and enhance collaborative learning.

### Iowa State University

Graduate Research Assistant

Ames, IA, USA

July 2022 - December 2022

- Developed a student dashboard using R, SQL, and MySQL, applying query optimization to reduce data retrieval times by 8 seconds and increase efficiency by 25% in a distributed system.
- Enhanced UI/UX with responsive design and automated updates using cron jobs, ensuring real-time data accuracy and usability.

### Snagger India Pvt. Ltd.

Software Engineer

Vijayawada, Andhra Pradesh, India

August 2019 - July 2021

- Engineered real-time API solutions for inventory synchronization, reducing fulfillment errors by 30% and improving system reliability.
- Collaborated on a mobile application integrating Bluetooth Low Energy (BLE) with fitness trackers, enabling seamless real-time data updates.
- Designed and tested embedded software components, ensuring compliance with technical specifications and customer requirements.

## EDUCATION

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### Iowa State University

Master's, Computer Engineering

August 2021 - August 2023

GPA: 3.49

- Graduated with a dual major in Computer Engineering and Cyber Security.

### SRM University

Bachelor's, Computer Science

July 2016 - May 2020

GPA: 3

- Graduated with a major in Computer Science and Engineering

## PROJECTS EXPERIENCE

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### Advanced Analysis of Null Pointer Dereferences in Java

Student

Ames, IA, USA

August 2022 - December 2022

- Analyzed null pointer dereferences in Java using data structures and algorithms, leveraging tools like Infer, SonarQube, and SpotBugs with the Juliet Test Suite to enhance software testing skills.
- Developed a stack trace-guided tool for fault localization, achieving superior accuracy over manual methods and demonstrating proficiency in systems programming and problem-solving.

#### **Network Packet Analyzer**

**Ames, IA, USA**

*Student*

*2023 - 2023*

- Developed a packet sniffer in C using libpcap on Linux, analyzing TCP/IP traffic to optimize network performance.

#### **Vehicle Safety System through Drowsiness Detection**

**Chennai, Tamil Nadu, India**

*Student*

*2018 - 2018*

- Designed a real-time drowsiness detection system using Matlab, incorporating Sobel Edge Detection, Viola-Jones, and K-Means Clustering algorithms for driver alertness analysis.
- Implemented data-driven facial and eye movement analysis, highlighting skills in algorithm development for safety-critical distributed systems.

### **SKILLS**

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**Programming Languages:** C/C++, Python, C#, Java, OOP

**Tools:** GCP, Docker, Terraform, Jira, Git, Trello

**OS and System:** Kali Linux, Embedded Linux, Unix/Linux

**Networking:** TCP/IP, Distributed Systems, BLE

**Additional Expertise:** CppCheck, Putty, Wireshark, Bug Tracking, CPU Architecture, RTOS, Multithreading