

Nithin Reddy Poola

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SUMMARY

Full-stack & distributed-systems engineer with strong foundations in **algorithms, data structures, and object-oriented programming**. Experienced in building scalable platforms and automation tools; comfortable with **low-level systems concepts, debugging, and performance optimization**. Academic and project experience with **ML-aware services and algorithmic modeling** relevant to design automation and optimization.

EXPERIENCE

UMBC Dept. of Computer Science & Electrical Engineering, **Software Development Engineer (SDE) Intern — Full Stack & CyberRange Platform**

Jun 2025 - Present

- Shipped features for the UMBC CyberRange Portal, a production platform provisioning isolated VMs for cybersecurity labs across courses.
- Full-stack ownership across **design → build → test → deploy**: implemented scalable **algorithm-driven microservices** (Node/Express, MongoDB) and **REST APIs** for class management; applied **automated testing and debugging workflows** to ensure correctness and prevent regressions.
- Implemented SAML SSO with secure session cookies and CSRF hardening; mapped faculty/student roles against UMBC IdP to reduce manual provisioning.
- Designed and maintained **automation workflows and system optimization algorithms** for VM lifecycle (Python/Node, VMware vCenter); implemented monitoring and **debug strategies for time-sensitive failures**, improving provisioning efficiency and system reliability.
- DevOps/Deploy: containerized services with Docker Compose, fronted by NGINX (TLS, canonical domains, health checks); added logs/metrics hooks for operational visibility.
- Authored admin runbooks and student lab guides, reducing onboarding issues for instructors and TAs.

UMBC, **Graduate Assistant (Grader) — CMSC 481 Computer Networks**

Sep 2024 - May 2025

- Evaluated routing, congestion control, and socket programming assignments; supported debugging of networked systems and packet workflows.

Oasis Infobyte, **Web Development Intern**

Oct 2023 - Dec 2023

- Built and tested an e-commerce frontend (HTML/CSS/JS) with clean design and automated regression tests; collaborated with QA to debug performance bottlenecks, improving task completion by 20% and reducing load times by 30%.

Small Talk Technologies, **Data Science Intern**

Aug 2022 - Oct 2022

- Trained ML models on behavioral signals to power recommendations; increased conversion rate by 10%.

EDUCATION

University of Maryland, Baltimore County (UMBC)

Computer Science • 2024 – Present

Relevant coursework: **Algorithms, Data Structures, Operating Systems, Distributed Systems, Computer Architecture.**

Saveetha School of Engineering (SIMATS), Chennai, India

Computer Science • 2020 - 2024

Honors: Academic Topper; Java Subject Topper; Patent Pending (IoT Door Unlocking)

LICENSES & CERTIFICATIONS

Microsoft Certified: Azure AI Engineer Associate

Microsoft • Issued 2025

Microsoft Certified: Azure Data Scientist Associate

Microsoft • Issued 2025

SKILLS

Programming: C/C++, Java, Python (OOP, Algorithm Design, Data Structures)
Backend: Microservices, REST API Design, Node.js, Express.js, Flask, WebSockets
Databases: MongoDB, PostgreSQL, MySQL, Redis
Cloud/Infra: AWS, Docker, Linux/Unix, Git, CI/CD
Other: Distributed Systems, Debugging, Optimization, Agile, Automated Testing

HONORS & AWARDS

Ranked 14/4909 (Year 3) and 91/4909 (Year 2); Java Programming Topper 493/500 (1/4909); Patent (IoT Door Unlocking)