Anisha Hossain Megha

anishahossain@usf.edu | +1 (656)-203-9269 | github/anishahossain | linkedin/anishamegha | MyPortfolio

EDUCATION

UNIVERSITY OF SOUTH FLORIDA   Tampa, FL
Bachelor of Science in Computer Science | GPA: 4.0   Expected May 2026
Awards: USF Green and Gold Presidential Waiver Award, Dean's List Award (Fall 2023, Spring 2024, Fall 2024, Spring 2025)
Relevant Coursework: Analysis of Algorithms, Software System Development, Data Structures and Algorithms, Computer Architecture, Software Engineering, Operating Systems, Cryptography

WORK EXPERIENCE

Systems Software Research Assistant | USF Interface Research Lab (IRL)   Aug 2025 – Present
- Engineered high-performance arithmetic systems by implementing modular RNS components in SystemVerilog, RISC-V, and Python, improving compute throughput by 57% in simulation benchmarks
- Built end-to-end Python automation pipelines for data generation and verification, reducing manual testing time by 40%
- Developed debugging and validation tools to analyze RNS computation errors and modeled low-power in-memory computing architectures for AI workloads, accelerating hardware–software co-design for energy-efficient systems

Research Assistant – Software Engineering | USF Computational Social Science and AI Lab   Jan 2025 – Aug 2025
- Implemented interactive experiment interfaces in React using TypeScript, including forms, buttons, real-time interaction flows, and a chatbox, improving participant data-capture reliability by 25%
- Configured frontend logic to accurately collect and transmit user inputs, reducing data-collection errors by 32%
- Integrated AI-generated responses into the chatbox UI by connecting frontend components to backend model endpoints, enabling responsive experiment-dependent conversations

Technical Research Intern | NASA L'SPACE NPWEE Academy   June 2024 – Sep 2024
- Automated portions of the team's analysis workflow using Python scripts, reducing manual data-processing time by 15% and standardizing output formats for design evaluations
- Collaborated with an 11-member team to organize design data, support simulation planning, and coordinate iterative testing cycles for a habitat research prototype
- Assessed preliminary project proposals for feasibility and documentation quality as part of the program's review panel

PROJECTS

InCollege | FullStack Developer | React, Node.js, COBOL, Docker, Git, Agile, Jira | InCollege.com
- Architected a custom Node.js API layer that bridged a modern React frontend with a legacy COBOL backend, enabling real-time authentication, job search, networking, and messaging for 100+ users
- Containerized the COBOL runtime in Docker and deployed the full stack across Render and Vercel for seamless cloud operation
- Implemented core platform features, including secure login, job posting/search, user profiles, messaging, and notifications using reusable React components, REST APIs, and structured data models.
- Delivered 25+ features across 10 Agile sprints, managing Git branches, pull requests, testing workflows, and cross-team collaboration for production-quality releases
- Worked on an Agile team with daily standups, burndown chart tracking, sprint planning, and retrospectives

Sorting Algorithm Visualizer | FullStack - JavaScript, HTML/CSS, React | SortingAlgorithmVisualizer.com
- Implemented an interactive sorting-algorithm visualizer from scratch using vanilla JavaScript, with dynamic animations illustrating each step of algorithms like Bubble Sort, Selection Sort, and Merge Sort
- Designed a modular code structure separating rendering logic, algorithm logic, and user controls, improving maintainability and allowing new algorithms to be added easily
- Built real-time visual debugging tools to help users understand algorithmic behavior and complexity

TECHNICAL SKILLS

Languages: Python, C#, C, C++, Java, JavaScript, SQL, COBOL
Web & Frameworks / Databases: React.js, Node.js, Express.js; MySQL, PostgreSQL, Typescript
Tools & Systems: Docker, Git, GitHub, Slack, VSCode, Jira, Postman, GitHub Copilot, Vercel, Render, Linux/Unix
Methodologies: Agile/Scrum, SAFe 6.0, Test-Driven Development
Core Competencies: Frontend & Full-stack development, REST API design, Object-Oriented Programming, Containerization, Debugging & Testing, Data Structures & Algorithms, CI/CD collaboration

LEADERSHIP

Residential Education at USF | Residential Assistant   Aug 2025 – Present
- Mentor and support a community of 30+ residents through conflict resolution and campus engagement initiatives