

Nafis Anwar

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SUMMARY

Software Engineer with a strong foundation in backend/frontend development and technical skills, focused on turning ideas into dependable systems and clear UIs. I've led a 4-person embedded robotics project, compiled a C++ VM to WebAssembly for real-time IDE tooling, and shipped a polyglot RSA platform (30% faster, 100+ rps) plus an NLP/semantic-search app over 28k+ posts, and developed scalable systems using Python. As a GDSC leader and RA, I document, communicate, and raise team execution, ready to contribute quickly and effectively in an internship.

EDUCATION

University of South Florida

Bachelor of Science in Computer Science

- GPA: 3.80

Aug 2023 - May 2027

Tampa, FL

EXPERIENCE

Google Developer Student Club at USF

Technical Marketing Lead

Jun 2025 - Present

Tampa, FL

- Designed graphics and created content for the GDSC Marketing Team, producing **52+ assets** using Photoshop and Illustrator. Reduced turnaround time from 4 days to 2 days by standardizing custom templates on Canva, enhancing team efficiency
- Created technical documentation and educational content for developer community events, managing a content pipeline serving **500+ developers**, while collaborating with cross-functional teams on technical event planning and developer experience optimization
- Developed run-of-show documentations and asset packs to keep cross-functional teams aligned.

PATHFINDER Team - Engineering Lab at USF

Lead Developer

Aug 2023 - Dec 2023

Tampa, FL

- Led a **cross-functional team of 4** in designing and implementing an **obstacle-avoiding robot**, programming and testing **C and Assembly code in Arduino IDE** to synchronize servo motors with ultrasonic sensors, achieving a **60% improvement in real-time obstacle detection and avoidance**.
- **Enhanced system reliability** by debugging with terminal tools, serial monitor, and logic analyzer to resolve timing issues (**95% fewer collisions**), and by designing comprehensive **edge-case test scenarios** in both simulated and real-world conditions to ensure rover-level robustness.
- Stood up a **Git-based workflow with code reviews and issue tracking**; produced build/test docs so new contributors could reproduce results quickly.

SQUARE International - Textiles Division

Human Resources Intern

Sep 2022 - Dec 2022

Dhaka, Bangladesh

- Validated **250 employee records in Optic and HCMS systems** by performing **data migration** and ensuring compliance with internal protocols. Participated in developing an **automated HR tracking system** using a relational database, which reduced reporting errors by 18%.
- Built **Excel/SQL reports** to summarize attendance and status changes for weekly leadership reviews, improving visibility into compliance gaps.

PROJECTS

GritVM Web IDE | [GitHub](#)

University of South Florida

Aug 2025 - Sep 2025

Tampa, FL

- Compiled a **C++ virtual machine to WebAssembly**, enabling browser-based execution and cross-platform portability with no native setup required.
- Exposed C++ internals to JavaScript via Emscripten bindings, achieving **150 ms state updates** in the UI and deploying the full-stack app on Vercel.
- Paired with a **React IDE with Monaco Editor** supporting step execution, syntax highlighting, and real-time memory visualization for GritVM assembly.

RSA Full-Stack Educational Playground | [GitHub](#)

University of South Florida

Jul 2025 - Aug 2025

Tampa, FL

- Developed a polyglot system by integrating a native C crypto engine with ASP.NET Core via C# P/Invoke, achieving 30% faster RSA operations compared to a pure C# implementation.
- Developed a RESTful API with endpoints for key generation, encryption/decryption, and digital signatures, load-tested to handle 100+ requests/sec with 120 ms average response latency.
- Automated cross-platform builds and Dockerized deployment, cutting setup time from 10 minutes to under 1 minute and enabling seamless reproducibility across Linux, macOS, and Windows.

MediTrends | [GitHub](#)

University of South Florida

May 2025 - Jun 2025

Tampa, FL

- Developed a full-stack system analyzing **28k+ Reddit posts/comments** across 18 communities, with **built-in semantic search** using FAISS vector structures, achieving retrieval in **110 ms**.
- Applied **NLP pipelines (TensorFlow, PyTorch)** for clustering and trend detection, generating reports with **3 KPIs (volume, growth, sentiment)**.
- Implemented a **Flask backend** with endpoints for search and trending and **ML-enhanced semantic search**; delivered a clean, responsive Tailwind frontend.

Leadership

Residential Education at USF

Resident Assistant

Aug 2025

- Fostered community engagement by organizing and facilitating 2 social and educational programs per semester, averaging 18 attendees, and boosted floor participation by **26%** for 34 residents within my community
- Created **automated reporting and tracking systems** for community metrics, handling **18 conflict resolution cases** and **58 technical inquiries** with systematic documentation while serving as the first point of contact for **500+ residents** across our assigned residential spaces.

TECHNICAL SKILLS

- **Programming Languages:** C, C++, Python, Java, C#, JavaScript, HTML5/CSS, SQL, Assembly (Arduino IDE)
- **Frameworks & Tools:** Flask, React.js, MongoDB, TensorFlow, PyTorch, Git, FAISS, Arduino, AWS, Azure, Rest APIs
- **Core Knowledge:** Data Structures, Object-Oriented Design, Software Quality Assurance, RISC-V, Computer Architecture, Computer Organization, Analysis of Algorithms, Software System Development, Artificial Intelligence