

Atharv Joshi

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EDUCATION

University of Illinois Urbana-Champaign | Grainger College of Engineering
B.S. Computer Engineering and Systems Engineering | Junior Standing | GPA: 3.73

Expected May 2028

TECHNICAL SKILLS

Programming: Python, C++, C, Rust, TypeScript, JavaScript, SQL, Bash

Software & Data: Linux, Next.js, React, Node.js, Express, PostgreSQL, BigQuery, REST APIs, Git

Embedded & Testing: FreeRTOS, STM32, ESP32-C6, Raspberry Pi 4, MQTT, TCP/IP, GitHub Actions, CI/CD

AI & Developer Tools: OpenAI Codex, Claude, Gemini, ChatGPT Work, MCP, AI-assisted development, agent orchestration

EXPERIENCE

AI Engineer Intern | Credio - AI Agents for Risk Operations

Sep 2026 - Present

- Built and HTTP-tested a Python Model Context Protocol (MCP) server exposing a prototype merchant-risk tool; integrated it with ChatGPT Work over HTTPS and verified agent tool execution through logs and reports.
- Built five-agent research workflows; screened 25 accounts and audited 52 source claims for evidence quality.

Undergraduate Researcher, Embedded Systems | UbiHealth Lab, UIUC

May 2026 - Present

- Built an ESP32-C6-to-Raspberry Pi sensing pipeline streaming 100 Hz data over Wi-Fi/TCP, recording local CSV files, and automatically uploading completed recordings to Box.
- Separated sensing and TCP networking with FreeRTOS tasks and a 2,000-sample RAM queue; validated 60.07 minutes and 360,450 samples without detected timestamp gaps above 20 ms.
- Built a Streamlit dashboard for live/recorded vibration data, FFT/RMS analysis, and sensor-health checks.

Embedded Firmware Engineer (Student Team) | The Boring Illini

Aug 2025 - May 2026

- Built and deployed STM32F767ZI/FreeRTOS firmware on a competition tunnel-boring machine, integrating strain and temperature sensing, watchdog health checks, and Ethernet/UDP telemetry.
- Built Python/Bash logging tools to test packet loss, malformed JSON, timing, and reconnect behavior; collaborated with a five-person embedded team.

Software Engineering Intern | Evolphin Software

Jun 2024 - Aug 2024

- Integrated an image expansion/reduction prototype into an existing Linux C++ application, adapting image formats, memory layout, APIs, and build dependencies.
- Automated Python benchmarks across 250+ images up to 4K and resolved CI issues after engineer review.

Research Intern | George Mason University FinTech Research Lab

Jun 2024 - Aug 2024

- Independently analyzed 7.44B+ GitHub Archive events (>20 TB) across 650+ blockchain open-source projects using BigQuery, SQL, and Python.
- Reduced query costs using SQL pre-aggregation, verified repository counts, and coauthored a published paper.

PROJECTS

SeaForge | Rust, Express, Gemini

2026

- Built a Rust naval simulation engine for structural failure, stability, and propulsion, plus the Gemini design-testing loop and Express backend interface.

Rap Market Index | Next.js, TypeScript, PostgreSQL

2026 - Present

- Built a solo fantasy trading web app with portfolios, transactional trading, music-data APIs, and price history.
- Implemented 45 SQL migrations, 38 API routes, 86 Vitest test files, and five GitHub Actions workflows.

SELECTED RECOGNITION

Best Use of Gemini - \$5,000 Team Award, 2026 AI Engineer World's Fair Hackathon | Three published research papers | TEDx Speaker