

Sathwik Doddi

Permanent Resident | (407) 782 2438 | sathwik@gatech.edu | [linkedin.com/in/sathwik-doddi](https://www.linkedin.com/in/sathwik-doddi) | github.com/sathwikdoddi

EDUCATION

Georgia Institute of Technology

Atlanta, GA

Bachelors of Science in Computer Science + Math Minor — GPA: 4.00

Graduation May 2027

- **Concentration:** Mathematics and Artificial Intelligence
- **Relevant Coursework:** Data Structures & Algorithms, Intro to Artificial Intelligence, Discrete Math, Linear Algebra, Multivariable Calculus, Introductory Physics 1 & 2, Computer Organization and Programming, Objects and Design

EXPERIENCE

Software Development Intern (Embedded Systems)

May 2025 – August 2025

Amazon Web Services (AWS)

Austin, TX

- Refactor firmware in C to support config-driven polling with platform-specific optimizations, reducing polling load by 80%.
- Engineer thread-safe callback systems to trigger event-specific handlers in order to cut down response times.
- Expose platform-specific event states via UDP network protocol, improving server debugging efficiency.
- Write 300+ integration tests to validate end-to-end event detection, callback execution, and API accuracy across platforms.
- Optimize config parsing and memory usage, system firmware boot time by 25%.

Software Engineer

September 2024 – Present

RoboJackets RoboRacing @ Georgia Tech

Atlanta, GA

- Architect modular C++ software and ROS2 components, within a Docker container, accelerating prototyping by 25%.
- Implement graph-searching algorithms with sensor data, speeding up navigation and solution discovery by over 50%.
- Refine tuning, enhancing path-planning deviation from 1 meters to 0.12 meters, representing an 8x improvement.
- Optimize CI/CD pipelines via Docker, cutting deployment time for 200+ members by 30%.

Computational Neuroscience Research Intern

August 2024 – Present

Nabil Imam Group

Atlanta, GA

- Reproduce DeepCubeA's framework using deep RL and A* search in Python to achieve a 100% solve rate.
- Integrate and optimize biologically-inspired constraints to simulate human cognitive limits in planning and memory.
- Compare and visualize neural and symbolic agents across metrics like solution length, time, and sample efficiency.

Full-Stack Software Engineer

May 2024 – August 2024

SaleSpike Solutions

Orlando, FL

- Secure 200+ weekly leads to 10+ clients by creating customized web solutions aligned with business needs.
- Collaborate with clients to design user-friendly front-ends, contributing to a 20% revenue increase.
- Produce 40+ webpages with Agile methodologies, Jira, React, Express, and MongoDB, achieving 95% customer satisfaction.
- Integrate secure payment processing using Stripe, generating an additional 10% in client revenue.

PROJECTS

Monty - Trading Strategy Backtesting

React, FastAPI, Monte Carlo Simulations, Data Visualization

- Developed a no-code trading algorithm backtester based on movements in indicators such as SMA, EMA, RSI, etc.
- Implemented 500 Monte Carlo simulations to analyze trading strategies and provide AI-driven feedback for users.
- Achieved nearly 3x faster performance than market alternatives by calculating indicators in-house rather than using APIs.
- Leveraged FastAPI and React for a seamless and responsive user experience, optimizing backend and frontend performance.

{Pal}go – Competitive LeetCode Tracker App

React Native, AWS, Supabase, PostgreSQL, Expo

- Develop and publish a cross-platform mobile app using React Native and Expo, deployed to real users via the App Store.
- Design normalized PostgreSQL schema across 5+ relational tables, enabling efficient querying for real-time challenge data.
- Implement Supabase triggers and setup AWS polling server to update ELO and Palgo scores with < 200ms update latency.
- Integrate LeetCode API to track 2,000+ weekly submissions, syncing stats every second for accurate challenge outcomes.

Coastlens - Hurricane Risk Analysis Web App

Python, Flask, React, Node.js, RESTful APIs

- Deliver a full-stack app with React and Flask to assess flood and hurricane risk across 40,000+ regions.
- Fetch data with Flask FastAPI endpoint and display location-based risk with Maps and ARCGis for 1000+ regions.
- Identify insurance premiums by zip code, comparing local to national averages, speeding up financial-insights by 4x.
- Scrape 10,000+ hurricane-related articles using Firecrawl, storing data with Hugging Face and Pinecone.
- Establish RESTful API routing to blend front-end selections with back-end requests.

TECHNICAL SKILLS

Languages: C++, C, Java, Python, SQL, Rust, JavaScript, HTML/CSS

Frameworks/Tools: React, React-Native, PostgreSQL, Node, Flask, Flutter, Express, Redis, Matplotlib, RESTful APIs, Google Cloud, AWS, Git/GitHub, Linux, Docker, MongoDB, Pinecone, Expo, VS Code, Bash Scripts