Surya Prakash Murugavvel

Atlanta, GA | (404) 901-9671 | suryamvvel@gmail.com | LinkedIn - linkedin.com/in/suryaprakash-m7 | GitHub - github.com/SuryaM-720s

Education

Georgia State University Atlanta, GA
Bachelor of Science in Computer Science, Minor in Mathematics Expected Graduation: May 2027
Deans List Spring 2025, Summer 2025

- **Relevant Coursework:** Data Structures & Algorithms, System-level Programming, Computer Organization & Programming, Software Development, Programming Language of Concepts, Computer Networks, Discrete Mathematics, Calculus I / II / III, Probability & Statistics, Linear Algebra, Numerical Analysis I, Physics I / II, Electronics.

Skills

Languages: C, C++, Python, JavaScript, HTML/CSS, Verilog, VDHL, MATLAB, MySQL, MongoDB
Frameworks/Libraries: ReactJS, Next.JS, Three.JS, TensorFlow, PyTorch, Pandas, NumPy, Selenium
Networking & Systems: Wireshark, TCP/IP, UDP, DNS
Tools/Technologies: Amazon Web Service (AWS), Docker, Git, GitHub, Emscripten, RestAPIs, Blender, Circuit Analysis (DC Circuits, AC Circuits, Fourier Analysis), Oscillators
Platforms: Windows, macOS, Linux

Projects

Neuromuscular-Controlled RC Car | *C++, Arduino, CAD, Signal Processing, Circuit Design* August 2025 – Present

- Developing a microcontroller-driven RC car featuring sensor-based steering and motor control for dynamic terrain adaptation.
- Integrated CAD-modeled chassis and custom circuits to optimize weight distribution and response timing.
- Reinforced knowledge in **embedded systems, hardware–software integration,** and **signal processing** through iterative testing.

Style.Me | *Python, HTML/CSS, JavaScript, Selenium, OpenAI API, Pinterest API* November 2025

- Built and deployed a Chrome extension that performs real-time style analysis for personalized apparel recommendations from online retailers.
- Optimized data collection by integrating **Selenium-based scraping** with fashion APIs to improving **product retrieval speed and coverage**.
- Leveraged **LLM-based natural-language processing** to interpret style queries and refined skills in **API integration, data parsing,** and **user-experience** optimization.

Threadoku | *C++, JavaScript, WebAssembly, Emscripten, CPR, nlohmann/json* April 2025

- Architected a multi-threaded Sudoku solver compiled to WebAssembly for **interactive browser** visualization.
- Increased algorithmic efficiency by **63 %** through parallel processing, thread synchronization, and dynamic load balancing.
- Enhanced expertise in **concurrency, performance tuning, and scalable system design** for compute-intensive applications.

PaperKeys | *ReactJS, JavaScript, MediaPipe* February 2025

- Collaborated on an interactive virtual piano that uses **hand tracking** with a printed keyboard for **real-time note feedback.**
- Improved tracking precision by replacing OpenCV with custom anchor-point alignment, reducing note-detection errors by **>20%.**
- Refined expertise in **computer vision, real-time data processing, and user-interaction modeling** within team-based agile development.

DiagnAI | *Python, HTML/CSS, JavaScript, Anthropic API* October 2024

- Collaborated in an agile team to create an AI-powered health assistant providing personalized symptom screening and medical insights.
- Optimized backend asynchronous request handling and knowledge-base integration to reduce query latency by **35 %**.
- Learned to architect **scalable backends**, manage **asynchronous requests,** and design **intuitive conversational UIs.**

Extracurriculars

Rocket Technologies GSU | Software August 2024 – Present

- Contributed to the design and simulation of model rockets and autonomous rovers using thrust vector control systems to enhance flight stability and precision.
- Improved thrust-vectoring performance by **25%** through iterative testing, control-loop tuning, and data analysis with **MATLAB** and embedded software tools.
- Gained hands-on experience in **aerospace simulation, sensor calibration, embedded control systems**, and **team leadership** through multidisciplinary collaboration.