Jack Stoltz

646-799-5047 | jstoltz6@gatech.edu | linkedin.com/in/jack-stoltz | github.com/JackStoltz | jackwstoltz.com

Education

Georgia Institute of Technology December 2027
BS Computer Engineering | Concentrations: Systems Architecture & Distributed Systems GPA: 3.75/4.00
Coursework: Computer Architecture, Operating Systems, Machine Learning, Object-Oriented Programming, Data Structures & Algorithms, Probability & Statistics

Experience

AMD May 2026 – Present
CPU Performance Engineering Intern Austin, TX
- Joining AMD's Client CPU team to optimize Ryzen AI processor cores powering next-gen Copilot+ laptops and desktops
- Profiling inference, gaming, and productivity workloads to identify CPU and memory subsystem bottlenecks in C++
- Building AI agents connected to MongoDB MCP for interpretation & visualization of simulation results for quicker iteration

Intel Jun 2025 – Dec 2025
GPU Software Engineering Intern Chandler, AZ
- Engineered an end-to-end Python data pipeline to validate PSMI signal integrity through the GPU memory fabric
- Standardized pipeline reuse across GT/SM and Graphics SoC clusters, cutting debug time for validation engineers by 60%
- Integrated pipeline into Intel's CI/CD regression framework, enabling scalable nightly runs across 100+ test scenarios
- Troubleshot regressions for Nova Lake SoC, verifying stability of AI-accelerated compute and memory systems

AquaBots Lab (VIP) @ Georgia Tech Jan 2026 – May 2026
Lead Undergraduate Researcher - Computer Vision Team Atlanta, GA
- Spearheaded a 6-person team in designing and implementing computer vision pipelines for salmon detection & classification
- Enhanced YOLOv8 with depth channels, boosting salmon detection mAP by 20% in underwater field videos
- Designed and trained a custom PyTorch CNN for depth-contour extraction, enabling real-time fusion with YOLOv8 output
- Evaluated fish scale classifiers with AlexNet & 2-stream architectures, achieving 80%+ accuracy on lab-annotated datasets

College of Engineering @ Georgia Tech Jan 2026 – May 2026
Teaching Assistant - Computer Architecture (ECE 2035) Atlanta, GA
- Delivered recitations to 60+ students teaching dynamic memory allocation, register-level execution, & HW/SW interaction
- Held office hours weekly guiding students in debugging C++ memory faults, RISC-V assembly, and microcontroller projects

BrainBoost (VIP) @ Georgia Tech Jan 2025 – May 2025
Undergraduate Researcher Atlanta, GA
- Built Python NLP pipeline parsing student math input into ASTs, classifying operators, operands, & identifiers
- Architected React frontend & SQL persistence layer enabling students to define & manipulate symbolic expressions

New York Edge Jun 2024 – Aug 2024
Computer Science Instructor New York, NY
- Instructed programming principles to class of 30 high school students, including modularity, debugging, & version control
- Facilitated interactive group coding projects using JavaScript and Github simulating software development life cycles

Projects

Multithreaded OS Scheduler Apr 2026 – May 2026
- Implemented core scheduler logic in C coordinating up to 16 concurrent CPU threads through a shared ready queue
- Built thread-safe queue with pthread mutexes and condition variables, blocking idle threads to eliminate busy-waiting
- Designed FIFO & Round-Robin policies with fine-grained locking across mutexes preventing deadlock & reducing contention

Offline RAG System (Hermedoc) Nov 2025 – Jan 2026
- Designed a secure offline RAG system enabling DoD-restricted industries to query private data locally via LLAMA-3
- Generated embeddings with Hugging Face + LlamaIndex and managed local vector database for contextual retrieval
- Developed cross-functional React + Flask UI, streamlining data upload and chatbot interaction for non-technical users

Vision-Controlled Robotic Arm Oct 2024 – Nov 2024
- Implemented gesture recognition with MediaPipe and OpenCV, enabling webcam-based control of the arm's axes
- Interfaced Python vision pipeline w/ Arduino C++ firmware, allowing seamless actuation of servo motors from gestures

Technical Skills

Languages: Python, Java, C/C++, C#, Go, Rust, JavaScript/TypeScript, HTML5/CSS
Frameworks & Libraries: ReactJS, NodeJS, Flask, OpenCV, Pandas, PyTorch, TensorFlow
Tools & Platforms: Git/GitHub, Unix/Linux, PostgreSQL, NoSQL, SDLC, Excel, Agile, Azure, Docker, AWS