KRUSHAY BHAVSAR

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EDUCATION

Georgia Institute of Technology – GPA: 3.95/4.00, Faculty Honors **Atlanta, GA**
B.S. in Computer Science / Concentration in Information Internetworks & Cybersecurity May 2026

- **Relevant Coursework:** Systems & Networks, Computer Networking, Design & Analysis of Algorithms, Computer Organization & Programming, Data Structures & Algorithms, Statistics & Applications, Discrete Mathematics, Linear Algebra
- **Clubs/Activities:** GT Experimental Rocketry, Outdoor Recreation @ GT Bikepacking Staff, Startup Exchange, Intramural Soccer

SKILLS

Programming/Markup Languages: TypeScript, JavaScript, Python, Java, SQL, R, MATLAB, C, C#, HTML, CSS, SCSS, XML
Frameworks/Libraries: React.js, Node.js, Express.js, Java Spring, Google Guice, Google Guava, JUnit5, Django, Flask, Redux
Tools: PostgreSQL, Amazon Web Services (Cognito, EC2, ECS, ECR, S3, Lambda), PowerShell, Linux, Firebase, Git, Android Studio

EXPERIENCE

Georgia Tech Research Institute **Atlanta, GA**
Undergraduate Researcher Aug 2024 – *Present*

- Led the LLM Inference team, **reducing inference times by >15%** in the Evolutionary Multi-objective Algorithm Design Engine through **speculative decoding**, **tool-calling**, **retrieval augmented generation (RAG), prompt engineering, and batching**
- Developed an improved "Evolution of Thought" technique within LLM-Guided Evolution, a framework cited by Google DeepMind's AlphaEvolve, using a result-driven, self-enhancing feedback loop that fine-tunes architectural evolution

Wealthfront, Automated Investing Firm **Palo Alto, CA**
Backend Software Engineer Intern – Trading Infrastructure Team May 2025 – Aug 2025

- Designed and implemented a low-latency trade order pricing system for low-liquidity, wide bid/ask spread instruments to improve allocation prices for **over 1.4M trades daily** and **reduce order cancellations by >5%** using **Java, Hibernate, and MariaDB**
- Authored and presented in-depth **technical design documents** with **historical incident analysis, UML diagrams, and code-level insights** to the VP of Engineering & senior leadership to deploy the optimized pricing system across trading infrastructure
- Automated the pruning of stale trade account data via **batch processing jobs on Apache Airflow**, removing over **600K rows daily** and **40M+ rows of data total** to improve query performance and ensure high concurrency for account processes

Vertice AI, Financial Technology Startup **Durham, NC**
Associate Software Engineer Intern Jun 2024 – Aug 2024

- Developed an analytics solution using **React.js, Python, PostgreSQL, Express.js and AWS** technologies to assist credit unions in tracking growth/engagement and identifying marketing opportunities for specific members
- Automated the generation of transaction models by implementing a component-based system with vectorized full-text search to analyze member behaviors, resulting in a **40% reduction in code** volume and a **50% improvement in runtime** efficiency
- Devised predictive models to **efficiently analyze over $5 billion** in member transactions, track spending trends, and categorize members for partnered credit unions to know, grow, and measure their overall membership

Jane Street Capital, Quantitative Trading Firm **New York, NY**
Academy of Math and Programming Fellow Jul 2023 – Aug 2023

- Designed and implemented algorithmic solutions to complex problems in **game theory, graph theory, and linguistics** using Python, enhancing skills in data analysis, decision-making under uncertainty, and quantitative trading strategies
- Achieved 7th place in Jane Street's Electronic Trading Challenge (ETC) by developing high-frequency trading algorithms in a competitive 6-hour trading session, resulting in one of the highest Profit-and-Loss (P&L) scores among 80+ participants
- Collaborated with International Math Olympians to complete intensive coursework in **combinatorics and number theory**

Mentor Labs, Harvard Technology Startup (acquired) **Boston, MA**
Software Engineer Aug 2021 – Apr 2022

- Developed a full-stack application using **React.js, Express.js, Java Spring, PostgreSQL, and AWS** services to assist thousands of high school students in the college admissions process via a virtual guidance counselor and summer program recommendations
- Implemented a matching algorithm for scholarship/summer programs and leveraged React.js to create a seamless UX on the landing page, dashboard, scholarships, and summer programs pages, resulting in a **25% increase in user retention**
- Contributed to a cross-functional development team while following the Agile Scrum methodology and establishing weekly team goals/timelines, leading to a **global user base of over 10,000 students** and incubation at the Harvard Innovation Labs

PROJECTS

Mission Control Software, Attitude Determination and Control System (ADCS)
Embedded C, Python, SQLite, Grafana, Controller Area Network Protocol (CAN) Aug 2024 – May 2025

- Developed low-latency backend systems integrated with Featherweight altimeters for real-time rocket telemetry analysis, along with a data visualization dashboard for the Ground Systems Team at Georgia Tech Experimental Rocketry (GTXR) Club
- Implemented the Controller Area Network (CAN) Protocol using the STM32H7 hardware abstraction layer to ensure high-speed communication with flight systems as a core member of the Avionics Team

CERTIFICATIONS & AWARDS

Certifications/Courses: Introduction to IoT (Cisco), Introduction to Cybersecurity (Cisco), Practical Introduction to Quantum-Safe Cryptography (IBM), Basics of Quantum Information (IBM), CodePath Advanced Technical Interview Prep
Honors/Awards: 1st Place SimpliHacks Hackathon (international), 1st Place High Tech Hacks Hackathon (international), 2x Wolfram Alpha Award Winner, 1st Place KIPR Robotics Competition (national), Valedictorian of Secaucus High School