

# 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

**Elytra** <https://github.com/krushaybhavsar/elytra>  
*TypeScript, Express, Electron, SQL, AWS Cognito* September 2025 – Present

- Developed an open source, notebook-style database management tool that allows on-call engineers to streamline incident analysis by using natural language to explore data, generate complex SQL queries, and visualize trends/anomalies
- Designed a modular backend using the Service Provider Interface (SPI) pattern to support a plug-and-play database architecture, integrating LLM-powered, schema-aware SQL generation and metadata-driven retrieval to automate incident analysis

## 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