**Krushay Bhavsar**

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# **EDUCATION**

| **Georgia Institute of Technology,** *B.S. in Computer Science*Aug 2023 – May 2027   * **Relevant Coursework:** Introduction to Object Oriented Programming (CS 1331), Linear Algebra (MATH 1554) * **Clubs and Activities:** Startup Exchange, Venture Capital Club, CREATE-X, HexLabs, GreyHat Club, CS + Social Good, GOALSoccer, Table Tennis Association at Georgia Tech, Grand Challenges Living Learning Community   **Secaucus High School –** GPA: 4.851, *Valedictorian*Sep 2019 – Jun 2023   * **Honor Societies:** STEM Academy, National Honors Society (Vice President), Mu Alpha Theta (Officer), American Technology Honors Society, National English Honors Society, Science National Honor Society * **Clubs and Activities:** Robotics Club (President, Coding Officer, Engineering Officer), Junior State of America (Vice President, Chief of Staff, Director of Technology), Math Club (President), Science Club, Varsity Cross Country * **Honors and Awards:** Placed 1st in the international SimpliHacks and High Tech Hacks Hackathon, 2nd place Advanced Math Mathfax Contest, 8th place in state for Math Kangaroo, 1st place Kiss Institute of Practical Robotics (KIPR) National Botball Competition, KIPR Judge’s Choice Award, NJIC Cross Country Divisional Champion   **Secaucus High School –** GPA: 4.851, *Valedictorian*Sep 2019 – Jun 2023   * **Clubs and Activities:** STEM Academy, Robotics Club, Junior State of America, Math Club, Varsity Cross Country * **Honors and Awards:** Placed 1st in the international SimpliHacks and High Tech Hacks Hackathon, 2nd place Advanced Math Mathfax Contest, 1st place Kiss Institute of Practical Robotics (KIPR) National Botball Competition |
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# **EXPERIENCE**

| **Vertice AI, Financial Technology Startup**  **Durham, NC**  *Associate Software Engineer Intern* Jun 2024 – Aug 2024   * Developed an analytics solution using Python, PostgreSQL, Express.js, React.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 70% reduction in code volume and a 50% improvement in runtime efficiency * Devised predictive models to efficiently analyze $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 Intern*  Jul 2024 – Aug 2024   * 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 * 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 * Completed intensive coursework in combinatorics, number theory, and programming under the guidance of IMO medalists   **Cisco Systems, Technology Cooperation**  **New York, NY**  *Summer Extern* Jul 2022   * Participated in a highly selective program (~10% out of 900+ applicants) to gain industry experience in IoT and cybersecurity * Formulated and presented innovative solutions for mass transit challenges using Cisco technologies such as Meraki MR56 Camera systems, LoRaWAN, and CyberVision, resulting in increased rail ridership and enhanced rider safety * Achieved NYC Extern of the Day by excelling in workshops, shadowing company executives, and demonstrating leadership and technical skills in IoT, AI/ML, and Meraki Solutions, among various other networking technologies   **Mentor Labs, Harvard Technology Startup** (acquired)  **Boston, MA**  *Senior Software Developer* Aug 2021 – Apr 2022   * Developed a full-stack application using the PERN (PostgreSQL, Express.js, React.js, Node.js) stack 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   **Accel Learning, Tutoring Center**  **Secaucus, NJ** *Python Tutor* Nov 2020 – Aug 2021   * Instructed students on the basics of programming in Python and helped spark their interest in the field of computer science * Developed an easy-to-understand project-based Python curriculum designed for high school and middle school students * Taught students Python modules like PyGame and Matplotlib to create various games and complex physics simulations   **My Fine Mind, 501c3 NJ Nonprofit Organization**  **Secaucus, NJ**  *Co-Founder, Chief Marketing and Technology Officer* Aug 2017 – Aug 2021   * Co-founded a nonprofit aimed at providing impoverished children with school supplies critical for their educational journey * Raised $25,000+ worth of school supplies for 300+ children who cannot afford adequate schooling in undeveloped areas * Developed a website (https://www.myfinemind.org/) for donation transactions, merchandise sales, blog posts, and outreach |
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# **PROJECTS**

| **Attitude Determination and Control System (ADCS), Mission Control Software**  *Embedded C, Python, SQLite, Grafana, STM32H7 Microcontroller, Controller Area Network Protocol (CAN)* Aug 2024 – *Present*   * Implemented a 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 at Georgia Tech Experimental Rocketry (GTXR) Club * Developed low-latency backend systems integrated with Featherweight altimeters for real-time rocket telemetry analysis, along with a data visualization dashboard for Mission Control as part of the Ground Systems Team   **Munch**  <https://joinmunch.app> *React Native, Redux, AWS (Cognito, EC2, S3), PostgreSQL, GraphQL, TypeScript, React.js, Firebase* Oct 2023 – Jan 2024   * A social culinary hub for college students to buy or sell homecooked meals and discover recipes created by other students in localized areas around campus, which gained over 200 signups within 24 hours of launch * Developed a cross-platform mobile application with cached state management, scalable persistent data storage, and a gateway authentication layer using relational database systems, a Prisma object-relational mapper, and AWS services   **Tutor Connect**  [https://tutorconnect.sboe.org](https://tutorconnect.sboe.org/) *React.js, Firebase, TypeScript, JavaScript, HTML, CSS* Jul 2022 – Sep 2022   * A cloud-based networking platform to connect students with verified tutors within the Secaucus Board of Education * Designed and implemented a site with a student dashboard (for filtering, searching, and connecting with listed tutors), a tutor dashboard (for managing tutor listings and connections), and an admin dashboard (to allow invited administrators to manage user permissions, verify tutors, and track tutoring progress) used by 500+ students and 60+ verified tutors daily   **Tileshift**  <https://tileshiftgame.com>  *TypeScript, JavaScript, HTML, CSS, ReactJS, Firebase* Dec 2021 – Jan 2022   * A web-based word puzzle game in which players must vertically align lettered tiles to spell words with limited moves * Developed a site automatically generates a unique puzzle daily and has gained over 125,000 hits on Reddit with an estimated 410 players across 3 different continents and an average engagement time of 7 minutes and 40 seconds per user   **Signslate**  <https://github.com/krushaybhavsar/signslate>  *JavaScript, HTML, CSS, ReactJS, Python* Jun 2021   * A web application that allows users to speak and translate English to American Sign Language (ASL) and ASL to English in real-time via webcam or microphone input and displays the ASL translation using web-scraped videos * The site web-scrapes videos using a Flask python server and displays them on a ReactJS frontend for translating speech to ASL, and uses a pre-trained video processing model for translating ASL to speech |
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# **SKILLS & INTERESTS**

| **Programming/Markup Languages:** TypeScript, JavaScript, Python, Java, SQL, R, MATLAB, C#, HTML, CSS, SCSS, XML  **Frameworks/Libraries:** React.js, React Native, Express.js, Django, Flask, GraphQL, Redux, NumPy, TensorFlow, OpenCV **Tools:** PostgreSQL, Amazon Web Services (Cognito, EC2, ECS, ECR, S3, Lambda), Firebase, Git, Jira, Android Studio, Unity **Interests:** Programming, Machine Learning, Jigsaw Puzzles, Biking, Travelling, Hiking, Running, *Breaking Bad*, *The Office* |
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# **CERTIFICATIONS & AWARDS**

| **Certifications:** Practical Introduction to Quantum-Safe Cryptography (issued by IBM), Basics of Quantum Information (issued by IBM), Introduction to Cybersecurity (issued by Cisco), Introduction to IoT (issued by Cisco)  **Honors/Awards:** 1st Place SimpliHacks Hackathon (international), 1st Place High Tech Hacks Hackathon (international), 1st place Kiss Institute of Practical Robotics (KIPR) Botball Competition (national), Valedictorian of Secaucus High School |
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