# RAHUL DATTA

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# **EDUCATION**

# Santa Clara University

Santa Clara, CA

B.S. in Computer Science, Minors in Mathematics & AI

Expected, June 2027

- Coursework: Data Structures & Algorithms, Object Oriented Programming, Multivariable Calculus, Discrete Math, Linear Algebra
- Involvements: President, Math and Computer Science Society; Alpha Kappa Psi; Chess Club; South Asian Community; ACM

#### PROFESSIONAL EXPERIENCE

# MathGPT | math-gpt.org

San Fransisco, CA

Apr 2025 - Jul 2025

Full Stack AI Engineer

- Architected an LLM-driven Practice-Test engine with Next.js serverless API routes, OpenAI tool-calls, Supabase, and Mixpanel Analytics that streamed 120K+ questions to 9K+ users in 30 days and increased average session length by 34%
- Implemented a streak-based engagement engine using Supabase Realtime, Next.js cron tasks, Loops email API, and Clerk Auth, automating personalized reminders and lifting seven-day retention from 11% to 18% among 25K+ active users
- Optimized OpenAI function-call pipeline on Vercel Edge by enhancing Qdrant vector search and refining backend pipelines with deterministic ordering and atomic writes, resolving chat race conditions and reducing latency by 30% and overall error rate by 20%

## Santa Clara Sports Performance

Santa Clara, CA

Data Science Intern

Ian 2025 - Present

- Automated the extraction and transformation from 2.5M+ rows of Catapult GPS tracking data from men's and women's D1 soccer teams to generate actionable risk scores, enabling coaches to identify high-risk moments and proactively adjust training intensity
- Developed and refined machine learning models to analyze physiological and biomechanical data (velocity, acceleration, player load, metabolic power) for real-time injury risk prediction using Pandas, NumPy, and scikit-learn
- Collaborated with Sports Science Directors and Dr. Smita Ghosh to translate model insights into practical coaching recommendations, supporting data-driven decisions that optimize athlete health and performance

## Milio | milio.shop

Santa Clara, CA

Principal Software Engineer

Dec 2024 - Mar 2025

- Spearheaded the engineering and architecture of a modern e-commerce platform for collectibles, leveraging Next.js, React, TailwindCSS, Supabase (PostgreSQL), and Stripe for seamless product management, authentication, and payments
- Established robust local and cloud development workflows with Bun, Docker, and Vercel, and implemented automated database
  migrations and type generation to ensure data integrity and developer velocity, reducing manual CI/CD pipeline runtime by 40%
- Integrated secure Stripe Checkout and webhook handling, enabling real-time subscription management

## Revoteen | revoteen.com

San Ramon, CA

Software Engineer

Jul 2022 - Jul 2024

- Led the development of a full-stack social networking platform connecting like-minded students across the globe using Next.js, Firebase, and AWS, amassing 10,000+ users across 70+ countries with 800+ opportunities (internships, projects, summer programs)
- Optimized recommendation and string-match algorithms for search and private messaging, improving user engagement by 25%
- Designed and implemented a refactor of serverless functions and APIs, reducing feed page load time by 20%

### **PROJECTS**

# Imaginary Ticketing | Source Code

Remote

Solo Founder & Developer

- Developed and maintained a scalable Discord ticketing bot in Python, leveraging Discord.py, Flask, SQL, and async libraries to streamline support workflow for large online communities, amassing 25,000+ users across multiple servers
- Designed an async modular architecture, reducing ticket response latency by 30% and enabling seamless integration of new features
- Implemented a CI/CD pipeline to orchestrate deployments with PM2, ensuring 99.999% uptime and zero-downtime updates

#### Sheltr - Hack for Humanity 2025 Winner | Source Code

Santa Clara, CA

Software Engineer

- Architected and launched a web app that connects disaster victims with verified nearby shelters, featuring real-time filtering,
   reservations, and queue management powered by Google Maps APIs, winning Best Freshman Hack at SCU's Hack for Humanity 2025
- Integrated a FastAPI backend with AWS DynamoDB and Bedrock, and deployed the platform on AWS EC2 with Nginx, enabling scalable, secure data processing and authentication for both individuals and shelter providers

### **SKILLS & INTERESTS**

Languages/Frameworks: Python, TypeScript, C++, HTML/CSS, SQL, Bash, Express.js, React.js, Next.js, Node.js, Flask, REST Technologies: PyTorch, Pandas, NumPy, PostgreSQL, Linux, Git, Docker, Supabase, AWS (EC2, DynamoDB, S3), Github Actions, Jira Interests: Coffee Art, Western Philosophy, Food Prep, Chess, Vinyasa Yoga, Table Tennis, Puzzles, The Weeknd, Abstract Painting