

# Sahil Kamal

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## EDUCATION

**Relevant Coursework:** Data Structures and Algorithms, Software Engineering, AI and Machine Learning, Database Systems, Operating Systems, Computer Networking, Discrete Math, Linear Algebra

### Farmingdale State College

*B.S. in Computer Science | Dean's List*

### Nassau Community College

*A.S. in Computer Science | Magna Cum Laude, GPA: 3.8*

**Jan 2025 – Dec 2026 (Expected)**

*Farmingdale, NY*

**Jan 2023 – Dec 2024**

*Garden City, NY*

## TECHNICAL SKILLS

**Programming Languages:** JavaScript (ES6+), TypeScript, Python, Java, SQL, C, C++, F#

**Frameworks & Libraries:** React, Next.js, Node.js, Django, Flask, Spring Boot, React Native, Tailwind CSS, JavaFX

**Developer Tools & Platforms:** Git, Docker, AWS, GitHub, Vercel, Vite, Stripe, Figma

**Databases:** PostgreSQL, Redis, Firebase (Firestore), Azure SQL, MongoDB

## EXPERIENCE

### Ax2 Technologies

*IT Security Intern*

**May 2025 – Aug 2025**

*Mineola, NY*

- Discovered and remediated a high-severity **Insecure Direct Object Reference (IDOR) vulnerability** in a REST API through automated endpoint analysis, securing sensitive Stripe payment data for **125+ clients**
- Developed modular PowerShell automation scripts for compliance auditing, reducing weekly manual reporting by **70%** (5+ hours/week)
- Built an automated endpoint hardening pipeline to enforce security policies across 75+ nodes, cutting vulnerability exposure window by **33%**

### Nassau University Medical Center

*Software Engineering Volunteer*

**Jun 2024 – Aug 2024**

*East Meadow, NY*

- Engineered a Python-based patient verification system integrated with an SQL database to automate identity and appointment validation, processing **200+ daily check-ins** and reducing verification time by **90 seconds per patient**
- Implemented 12 data validation rules with comprehensive error handling, unit tests, and escalation workflows, decreasing check-in errors by **15%** in a high-volume clinical environment
- Deployed the solution to 8 pharmacy staff members; system remains in active use **over 1 year** post-deployment

## PROJECTS

### Relearnable – Full-Stack AI Learning Platform | Next.js, TypeScript, PostgreSQL | [Live](#) | [GitHub](#)

**Nov 2025 – Present**

- Architected and deployed a production educational SaaS serving **100+ active users**, handling **1300+ AI-generated assessments** through Google Gemini at **99.9% uptime**
- Engineered a Knowledge Correction Engine using RAG pipelines and vector embeddings to detect user misconceptions and adaptively rebuild their understanding through targeted curriculum trees, improving user placement test scores by **40%**, validated by educators who discovered gaps in their own expertise
- Cut API costs by **30%** and improved response times by implementing a hybrid caching strategy (Redis + PostgreSQL) for high-frequency queries

### Tratlus – AI Travel Planning Web App | React, TypeScript, Firebase | [Live](#) | [GitHub](#)

**Oct 2025 – Nov 2025**

- Developed an AI travel system generating personalized itineraries in **under 30 seconds** by capturing user preference data across destinations, activities, interests, and constraints
- Integrated RESTful Google Maps and Calendar APIs with non-blocking async workflows to enable automatic scheduling, reducing manual planning time by **60%**
- Implemented background conflict detection and event regeneration, reducing scheduling overlaps by **67%**

### ActuallyFeed – Full-Stack Donation Platform | Next.js, TypeScript, Stripe | [Live](#) | [GitHub](#)

**Jun 2025 – Sep 2025**

- Built a donation platform integrating Stripe webhooks for an international humanitarian organization, **quadrupling donation volume** to **250+** and reducing transaction completion time by **80%**
- Designed an interactive geospatial tracker visualizing global food delivery operations across multiple countries achieving **50%** faster load times via hardware-accelerated CSS

### FlavorBot – AI Recipe Generator (RamHacks 2025 Winner) | Java, JavaFX, SQL | [GitHub](#)

**Apr 2025 – May 2025**

- Won **“Best Use of AI/ML - 1st Place”** at RamHacks 2025 (Farmingdale State College Hackathon)
- Developed an AI-powered recipe generator creating **400+ recipes** for users while handling **20+ dietary constraints** through intelligent OpenAI prompt engineering
- Designed an iterative LLM refinement interface, reducing recipe revision cycles by **35%** through user testing

### Kairo – Interactive REPL OS Shell | Python | [GitHub](#)

**Sep 2024 – Dec 2024**

- Engineered a custom REPL shell with a recursive descent parser supporting pipe operations (**|**) and **50+ chainable commands**
- Built a type inference engine with automatic type conversions, decreasing runtime errors by **25%** across 18 beta testers