

# Sahil Kamal

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## EDUCATION

### Farmingdale State College

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

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

Jan 2025 – Dec 2026 (Expected)

Farmingdale, NY

### Nassau Community College

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

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 **150+ 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 **40%**
- Orchestrated disaster recovery simulations and optimized backup configurations, ensuring **100% data integrity** and reducing mean-time-to-recovery (MTTR) by **15%**

### Nassau University Medical Center

Software Engineering Volunteer

Jun 2023 – Aug 2023

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 **25%** in a high-volume clinical environment
- Deployed the solution to 8 pharmacy staff members; system remains in active use over **2+ years** post-deployment

## PROJECTS

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

Nov 2025 – Present

- Architected and deployed a production SaaS serving **100+ active users**, handling **1300+ AI-generated assessments** using Google Gemini with **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
- Reduced API costs by **30%** and improved response times by implementing a hybrid caching strategy (Redis + PostgreSQL) for high-frequency queries
- Achieved **50% faster load times** via hardware-accelerated CSS and React server components, optimizing UI responsiveness and increasing user retention

### Tratlus – Full-Stack 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 to prevent scheduling overlap while maintaining seamless user experience

### 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 processing **400+ recipes** using OpenAI with intelligent dietary constraint handling
- Designed an iterative LLM refinement interface, reducing recipe revision cycles by **35%**

### 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, reducing runtime errors by **30%** across 20 beta testers