

# Sahil Kamal

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## EDUCATION

### Farmingdale State College

B.S. in Computer Science

- **Relevant Coursework:** Data Structures & Algorithms, Software Engineering, AI & 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:** TypeScript, JavaScript (ES6+), Python, Java, C, C++, F#, SQL

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

**Developer Tools & Platforms:** Git, GitHub, Docker, AWS, 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)
- Engineered an automated endpoint hardening pipeline to enforce security policies across 75+ nodes, reducing 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 production automation suite to 10 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 on Vercel serving **100+ active users**, handling **1300+ AI-generated assessments** via Google Gemini with **99.9% uptime**
- Engineered a Knowledge Correction Engine using RAG pipelines and vector embeddings to detect user misconceptions and dynamically rebuild mastery through targeted curriculum trees, improving user placement test scores by **40%** and 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](#)

Jun 2025 – Oct 2025

- Architected an AI travel system generating personalized itineraries in **under 30 seconds** by capturing user preference data across interests, activities, 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 overlaps without blocking user experience

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

Jan 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
- Built an iterative LLM refinement interface, reducing recipe revision cycles by **35%**

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

Sep 2024 – Dec 2024

- Architected a custom REPL shell with a recursive descent parser, supporting pipe operations (|) and **50+ built-in chainable commands** with optimized execution
- Built a type inference engine with automatic type conversions, reducing compile-time errors by **30%** across 20 beta testers