Sahil Kamal

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Education

Farmingdale State College *Farmingdale, NY*
B.S. in Computer Science *Jan 2025 – Dec 2026 (Expected)*
- **Relevant Coursework:** Data Structures & Algorithms, Software Engineering, AI & Machine Learning, Database Systems, Operating Systems, Computer Networking, Linear Algebra, Discrete Math

Nassau Community College *Garden City, NY*
A.S. in Computer Science | ***GPA: 3.8*** *Jan 2023 – Dec 2024*

Technical Skills

Programming Languages: TypeScript, JavaScript (ES6+), Python, Java, C++, F#, SQL
Frameworks & Libraries: Next.js (React), React Native, Django, Spring Boot, JavaFX, Tailwind CSS
Tools & Design: Docker, Git, GitHub, OpenAI, Gemini, Stripe, Vercel, Vite, Figma, UI/UX
Databases: PostgreSQL, Redis, Firebase (Firestore), Azure SQL, MongoDB

Experience

IT Security Intern *May 2025 – Aug 2025*
Ax2 Technologies *Mineola, NY*
- Discovered and remediated a **High-Severity IDOR vulnerability** in a REST API through automated endpoint analysis, securing sensitive Stripe payment data for **200+ clients**
- Automated compliance auditing using PowerShell scripts, reducing weekly manual reporting by **70%** (5+ hours/week)
- Secured 75+ Windows endpoints via automated antivirus deployment, OS patching, and access control auditing
- Validated disaster recovery protocols achieving **100% restore success** across backup configurations

Software Engineering Volunteer *Jun 2023 – Aug 2023*
Nassau University Medical Center *East Meadow, NY*
- Engineered a Python-based patient verification system integrated with SQL database to automate identity and appointment validation, processing 150 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 Nov 2025 – Present
- Founded and deployed a production SaaS serving **100+ active users** with **1,300 assessments generated** via Google Gemini and **65% 30-day retention**
- Engineered a Knowledge Correction Engine using RAG pipelines and vector embeddings to detect 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 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 regeneration to prevent scheduling overlaps without blocking user experience

FlavorBot – AI Recipe Generator (RamHacks 2025 Winner) | *Java, JavaFX, SQL* 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* Sep 2024 – Dec 2024
- Designed and implemented a domain-specific shell language supporting **1000+ chainable commands** with composable return values
- Built a type inference engine with automatic type conversions, reducing syntax errors by **30%** across 20 beta testers