NILOY SAHA

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SUMMARY

Computer Science student and aspiring AI/ML Engineer focused on building scalable, data-driven systems using machine learning and automation. Experienced in developing and deploying production-ready solutions across cloud and full-stack environments. Currently a Software Developer Intern at Optimum Communications, contributing to monitoring automation and performance optimization in large-scale network systems.

EDUCATION

Hofstra University **New York, USA**

B.S. in Computer Science *Expected Graduation, Dec 2027*

- **GPA:** 3.46/4.00, *Dean's List*
- **Related Coursework:** Data Structures & Algorithms, Computer Architecture & Programming, Software Engineering, Object-Oriented Programming, Applied NLP and Text Mining, Operating Systems, Building RAG Agents with LLM (Course By **NVIDIA**), Machine Learning, Intro to Artificial Intelligence

EXPERIENCE

Optimum Communications INC. **New York, USA**

Software Developer Intern *Jan 2026 - Current*

- **Automated** infrastructure monitoring by configuring **Zabbix agents** and **SNMP polling** to collect **10+** system metrics per host, enabling real-time visibility across host and container layers.
- Engineered **Low-Level Discovery (LLD)** rules to dynamically monitor **8+** CPU cores per machine, reducing manual configuration effort by **70%**.
- Developed a custom **Bash-based discovery script** to auto-detect and monitor **Docker containers**, achieving **100%** automation of container observability workflows.
- Designed **trigger-based alerting** and **action pipelines** to reduce potential **mean-time-to-detection (MTTD)** by **50%+** and simulate enterprise-grade incident response.

Maurice A. Deane School of Law at Hofstra University **New York, USA**

IT Technician *Sept 2025 - Dec 2025*

- Automated log analysis and diagnostics in Python with Pandas, cutting resolution time by **15%**.
- Maintained **99% uptime** across 50+ endpoints through proactive monitoring and scripting.
- Developed a searchable **SQL-based knowledge base**, reducing repeat technical issues by **20%**.
- Implemented automated **TCP/IP and DNS testing scripts**, reducing manual network checks by **30%** and improving connectivity reliability.

PROJECTS

EduFlow AI | GitHub: https://github.com/NiloySaha84/Ai_Study_Companion **| Live:** https://ai-study-companion-eight.vercel.app/

- Developed a real-time AI tutor using **Next.js 15**, **VAPI.ai**, and **GPT-4**, achieving **<100 ms latency**.
- Raised learner engagement by **40%** through customizable AI companions and session analytics.
- Implemented CI/CD deployment on Vercel with **Supabase** and **Clerk Auth** for secure scaling.
- Engineered an event-driven backend supporting concurrent sessions with **99.9% uptime** and scalable cloud deployment.

Smart Syllabus Calendar Sync | GitHub: https://github.com/NiloySaha84/Syllabus-Calendar **| Live:** https://syllabus-calendar-navy.vercel.app/

- Built a **Next.js 14** app that converts syllabi into interactive calendars, saving students **80%** of manual entry time.
- Integrated **Google OAuth2 + ICS export** for calendar sync used by 100+ students.
- Optimized **React Big Calendar UI** with **Tailwind CSS**, improving usability and engagement by **40%**.
- Implemented serverless deployment with **auto-scaling** on **Vercel**, ensuring consistent **low-latency performance**.

SKILLS

Languages: Python, Java, TypeScript, JavaScript, SQL, C++, Bash
Frameworks & Libraries: ReactJs, NextJs, NodeJs, Matplotlib, Pandas, NumPy, Scikit-Learn, Seaborn, Huggingface, UV, LangChain
Databases: PostgreSQL, MongoDB, Supabase, VectorDBs (e.g. FAISS)
Cloud & DevOps: Google Cloud, AWS (EC2, S3, Lambda), Docker, Vercel, CI/CD Pipelines
Core Competencies: RESTful APIs, Data Structures & Algorithms, OOP, System Design, NLP, ML/AI, RAG, Agentic AI, Deep Learning