

# Navinashok Swaminathan

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## EDUCATION

### Columbia University

*M.S. in Computer Science (GPA: 3.87/4.0)*

New York, NY

Aug 2024 – Dec 2025

### College of Engineering Guindy (Anna University)

*B.Tech. in Information Technology (First Class with Distinction)*

Chennai, India

Jul 2019 – Apr 2023

## TECHNICAL SKILLS

- **Languages & Frameworks:** Java, Python, C++, JavaScript/TypeScript, Spring Boot, React, Node.js
- **Cloud & Systems:** AWS, GCP, Docker, Kubernetes, Linux, REST, gRPC, CI/CD, Observability
- **Data & ML:** PostgreSQL, MySQL, Snowflake, Redis, SQL, PyTorch, scikit-learn, LLMs/RAG

## PROFESSIONAL EXPERIENCE

### Amazon Web Services

Seattle, WA

*Software Development Engineer Intern*

Jun 2025 – Aug 2025

- Designed a fault-tolerant pricing backend (**Java**, AWS Lambda, Step Functions) with idempotent retries and policy-based access controls, automating complex pricing constructs for enterprise deals.
- Delivered a **React** console and hardened APIs for internal sales reps, eliminating a recurring class of SEV-2 incidents, cutting onboarding from 30 days to under 1 hour, and projecting \$1M+/month business impact.

### BNY Mellon

Chennai, India

*Software Engineer*

Jul 2023 – Aug 2024

- Developed real-time CDC/ETL pipelines (**Java**, Python) to replicate Oracle data to Snowflake for 5+ TB datasets, using partitioned parallel loaders that reduced runtime by 80%.
- Optimized analytics queries, redesigned SQL views, and reduced p99 latency by 50%, accelerating internal financial reporting pipelines.
- Led modernization of **Spring Boot 3** services, authored design docs and RFCs, and mitigated 21 CVEs with secure dependency updates, vulnerability lifecycle tracking, and CI/CD guardrails.
- Integrated BNY's internal Elzia AI platform to build an NLP triage classifier (~90% accuracy), reducing manual QA by 70% and adding explainability scores for audit compliance.
- Implemented encrypted S3 backups and checksum-verified restores in GitLab CI/CD, enabling DR for 50+ Teradata tables within 20 minutes end-to-end.

### Accolite Digital

Chennai, India

*Software Developer Intern*

Jun 2022 – Aug 2022

- Built a **Spring Boot** onboarding system with REST APIs, relational schema, and **React** UI for 300+ employees, reducing manual provisioning and integration errors.

### NIELIT

Chennai, India

*Data Science Intern*

Jun 2021 – Aug 2021

- Trained a fraud detection pipeline in scikit-learn on 1M+ transactions, improving baseline accuracy by 15% with ensemble and feature selection methods.

## SELECTED PROJECTS

### PharmaId — Secure Healthcare Service Platform (*Java, Spring Boot, PostgreSQL, GCP, React*)

[GitHub]

- Developed a secure full-stack microservice (Java/Spring Boot, **React**) on GCP with RBAC/JWT auth, achieving 90%+ test coverage and zero PMD violations while providing a responsive UI for emergency responders.

### TaskFlow — AI Workflow Automation Service (*Python, Flask, Google APIs, Docker*)

[GitHub]

- Developed an AI-driven automation platform integrating Gmail, Todoist, and Google Calendar via OAuth 2.0 to convert emails into structured tasks using multilingual NER and temporal extraction.

### XQL — XML SQL Compiler (*Python, Compiler Design, PostgreSQL*)

[GitHub]

- Implemented lexer, parser, and code generator translating XML-based queries to optimized SQL with full syntax validation and cross-database portability for schema migration.

## DISTINCTIONS

- **IIT-JEE Advanced (2019):** Top 1% nationwide with admit to IIT Madras

- **SOF International Mathematics Olympiad (2017):** Rank 5 in International Zone