Peter Do

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EDUCATION

Virginia Tech — **Blacksburg, Virginia**

B.S. in Computer Science, Minor in Mathematics — *Graduated, December 2025*

Master of Engineering in Computer Science and Applications — *Expected Graduation, December 2026*

- **Graduate GPA:** 3.96/4.00 | **Undergraduate GPA:** 3.63/4.00
- **Coursework:** Data Structures & Algorithms, Mobile Software Development (iOS), Introduction to AI, Computer Systems, AI Tools, Parallel Computation, Network Architecture and Protocols, Database Management Systems

EXPERIENCE

Capital One — **McLean, Virginia**

Software Engineering Intern — *June 2026 - August 2026*

- Developed an end-to-end physical card kiosk prototype using Kotlin, Jetpack Compose, and REST APIs, integrating mobile card issuance and replacement workflows with internal card-services APIs and kiosk hardware.
- Built backend microservices for account authentication, card selection, and data management, supporting an initiative projected to increase Day 0 card activation by more than 55% and reduce $11.7M in annual shipping costs.

Collins Aerospace (RTX) — **Remote**

Engineering Application Development Intern — *June 2025 - May 2026*

- Architected a MongoDB automation platform using Crossplane XRDs, Kubernetes, Helm charts, and Argo CD GitOps, developing end-to-end CI/CD pipelines that accelerated database provisioning for internal teams by 80%.
- Deployed a Docker-based Borg backup service via Puppet, running daily multi-threaded MySQL dumps to Borg, cutting the backup window from 2.5 hours to 30 minutes and enabling rapid restores for critical databases.
- Executed the migration of enterprise-scale AWS infrastructure from a deprecated legacy environment to new cloud environments, establishing standardized migration patterns and documentation to streamline future application transitions.

Knowmadics — **Remote**

Software Engineering & Product Management Intern — *May 2024 - May 2025*

- Built internal automation tools that streamlined software version releases, reducing deployment time by 25%.
- Produced detailed requirement documents for 2 flagship products by conducting weekly stakeholder interviews across international teams, resulting in reduced specification ambiguity and accelerated development cycles.
- Designed and implemented automated REST API testing pipelines using Postman, validating 100+ endpoints and cutting production defects by 30% through C#/.NET backend enhancements.
- Created 20+ Angular.js components including data tables and dashboards for improved user experience.
- Led end-to-end QA testing for web and mobile applications across 6 Agile sprints, creating structured test plans and managing bug lifecycles in Jira and Azure Boards to reduce average issue resolution time by 20%.

Nora AI — **Remote**

Software Engineering Intern — *June 2024 - August 2024*

- Developed key backend features for an AI mock-interviewer platform using ASP.NET Core, fine-tuning OpenAI GPT models to achieve 90% accuracy in candidate performance evaluation across 100+ interview sessions.

PROJECTS

Multi-hit Carcinogenic Mutation Detection Parallelization | C, OpenMP, Python

- Optimized a 2-hit carcinogenic mutation detection algorithm by redesigning sparse genomic matrices into a dense, patient-indexed structure and implementing OpenMP thread-level parallelism, reducing CPU runtime by 65%.

GreenThreads | *React, Bootstrap, Flask, Selenium, BeautifulSoup4, DynamoDB, AWS Cognito*

- Built a full-stack web application that promotes eco-friendly shopping by offering secondhand alternatives to fast fashion.
- Implemented web scraping functionality through BeautifulSoup4, Selenium, and the Google Shopping API in Python.

AI Coding Agent Evaluation Platform | *Python, FastAPI, Docker, PostgreSQL, Docker*

- Built a reproducible platform evaluating AI coding agents across 10+ repository-level tasks in isolated environments.
- Automated 100+ trials**,** enabling comparisons of agent success, cost, and latency across different resource configurations.

SKILLS

Programming: Python, JavaScript, Java, C#, TypeScript, Go/Golang, PowerShell, Dart, Swift, Kotlin, C, C++, SQL

Frameworks/Databases: React.js, Angular.js, Next.js, Flutter, Flask, Spring Boot, MongoDB, Express.js, PostgreSQL

Tools: Amazon Web Services, Kubernetes, Linux, Crossplane, Postman, PyTorch, Jira, Docker, Azure, Pandas, NumPy, Git, Jenkins