

# Philip Clement

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## EDUCATION

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**Virginia Tech** | Blacksburg, VA

May 2026

*B.S. in Computer Science*

**GPA:** 3.9/4.0

**Honors:** President's List, Dean's List

**Relevant Courses:** Object-Oriented Programming (Java), Data Structures & Algorithms (Java), Computer Organization I & II (C), Computer Systems (C), Discrete Math, Linear Algebra, Combinatorics

## EXPERIENCE

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**Hughes Network Systems** | Gaithersburg, MD

June 2025 - August 2025

**Full-Stack Software Engineer Intern**

- Collaborated with an **Agile** development team for the Unified Broadband ActiveTech Management System contributing to backend tooling, automated testing, **PostgreSQL** database integration, and system monitoring
- Streamlined CI/CD workflows by writing **Playwright** end-to-end **TypeScript** tests and integrating them with **Jenkins** pipelines and backend **RESTful APIs**, reducing manual testing time by ~15% (saving 3+ developer hours per week)
- Developed a **Go**-based **Prometheus** metrics collection service and **Grafana** dashboards, expanding monitoring coverage to **25+ internal endpoints** and improving overall system observability
- Containerized and deployed the ActiveTech Dashboard using **Docker** and **Podman**, adapting **Ansible**-based shell deployment scripts with environment-specific configurations and managing privileged user requirements
- Converted legacy **Perl** code to **Python**, modernizing the codebase and ensuring compatibility with current systems

**VG Systems** | Quantico, VA

June 2024 - September 2024

**Artificial Intelligence/Machine Learning Intern**

- Spearheaded CI/CD development of an **AI-powered application**, handling design, code, and deployment within a 3-week deadline
- Integrated OpenAI's GPT-3.5-turbo model to enhance the custom AI application with advanced NLP capabilities, while leveraging **Microsoft Azure** for scalable and cost-efficient hosting
- Proactively pursued self-learning in AI/ML, passing **AI-900: Microsoft Azure AI Fundamentals Certification** with a 933/1000 score sponsored by the company
- Recognized for exceptional performance during the internship, leading to a personal invitation from the CEO to join his future startup venture focused on building AI applications

## PROJECTS

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**Finance Tracker** | Java, Spring Boot, MySQL, Hibernate, Maven, REST API

- Created a Personal Finance Tracker REST API with **Spring Boot** that allows users to log expenses, set budgets, and view spending analytics. Utilized **Spring Data JPA** with custom **JPQL** queries for efficient aggregation, implemented proper entity relationships in **MySQL**, and followed RESTful design principles with comprehensive CRUD operations.

**Fork-Join Thread Pool** | C, pthreads

- Implemented a high-performance **multithreaded** fork-join thread pool framework in **C** featuring work stealing and efficient task scheduling. Utilized advanced **concurrent** and **systems programming** concepts, including lock-free optimizations, parallel programming, and cache-aware design patterns.

## TECHNICAL SKILLS & CERTIFICATIONS

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**Languages:** Java, Python, JavaScript, C/C++, Go, Rust, React, TypeScript, SQL

**Technologies:** Spring Boot, Jenkins, Playwright, Microsoft Azure, PostgreSQL, REST APIs, Git, Docker, Ansible, Grafana

**Certifications:** AI-900: Microsoft Azure AI Fundamentals, PCEP-30-01 Python Institute Entry-Level Python Programmer