

Paris Phan

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EDUCATION

University of Virginia

Aug 2023 – May 2027

B.A. Computer Science, B.A. Mathematics. GPA: 3.8/4.0

Charlottesville, VA

- Relevant Coursework: Parallel Computing, Computer Architecture, Data Structures & Algorithms, Software Engineering, Machine Learning, Database Fundamentals, Discrete Math, Linear Algebra, Differential Equations

EXPERIENCE

Founding Software Engineer, *GreekCore*

Nov 2025 – Present

- Serving **2,500+** active users and **\$5k MRR** on a custom Google Cloud Platform microservices ecosystem
- Processed **\$800,000+** in transaction volume by engineering a custom banking layer with **Stripe financial APIs**, implementing distributed locking and idempotency keys to ensure financial data integrity
- Implemented **Workload Identity Federation** and **Github Actions** to reduce deployment friction and establish a secure, automated CI/CD pipeline without the use of service account keys
- Implemented an **Application Load Balancer** to route traffic to independent Cloud Run services via **Serverless NEGs** for a multi-tenant GCP architecture using a **shared VPC model** to centralize network management

Software Engineering Intern, *Pelagic AI*

Jun 2025 – Aug 2025

- Designed an **agentic airport simulation** using **dual LLM agents** (controller & analyst) to detect suspicious activity, validating the viability of **automated detection methods** for satellite imagery analysis
- Modeled **200,000+** map nodes in **PostgreSQL** and optimized **SQL-to-CUDA C++ pipelines**, reducing runtime by **85%** to enable real-time entity movement and realistic scene updates
- Reduced scenario creation time **from hours to minutes** by designing a modular architecture with **Model Context Protocol (MCP)** adapters, allowing rapid behavior generation with **zero core code changes**
- Scaled simulation throughput with a **Dockerized distributed stack** running concurrent scenarios across compute nodes, achieving **near-linear scaling** and accelerating evaluation of behaviour patterns

Machine Learning Researcher, *Collaborative Robotics Lab at UVA*

Feb 2025 – Dec 2025

- Improved an **autonomous-driving model** by **44%** through building a modular planning system on top of a vision-language model, validated on the **NuScenes dataset** and scaled using **UVA's H200 HPC cluster**
- Built **reproducible robustness tests** for vision-language models (corruption, occlusions, lighting artifacts), enabling consistent model comparison and guiding the lab's selection of reliable VLMs for autonomous robotics
- Developed a **3D mouse tele-operation interface** for the Franka Research 3 robotic arm using **Polymetis**, enabling researchers to collect imitation-learning demonstrations for autonomous manipulation task training

President, *Google Developer Groups*

May 2025 – Present

- Led workshops on **Google Cloud Platform (GCP)** (Cloud Run, BigQuery, Vertex AI, Firebase)
- Grew chapter to **600+** members with **18% growth** in the first month through strategic restructuring
- Organized **100+** attendee speaker events, coordinating with industry guests and campus partners

Teaching Assistant, *Data Structures & Algorithms, UVA*

Jan 2024 – Dec 2025

- Taught **object-oriented programming** in Java for a 300+ student class, leading lab sessions and office hours

PROJECTS

Hackathon Overall Winner - **Dr. Andy** | github.com/paris-phan/and-e

Mar 2025

C++, ROS2, CAD, Rapid Prototyping

- **1st/800 at HooHacks 2025**; Tele-operated "surgeon in a box" with low-latency VR piloting
- Quest 3 hand-tracking → WebSocket bridge → inverse kinematics on custom 3D-printed 5+1 DOF arms
- Engineered custom **C++** firmware for ESP32 control loops for stable real-time manipulation

TECHNICAL SKILLS

Languages/Libraries: Python, C++, Java, React, TypeScript, SQL, Swift, CUDA

Infrastructure/Tools: Docker, REST, CI/CD, AWS, GCP, Git, Figma

Data/ML: PyTorch, scikit-learn, NumPy, RAG, LLM/VLM, HPC (Slurm)