Anh Vu

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Education

Grinnell College **Expected Graduation:** May 2025
Bachelor of Arts, **Computer Science & Statistics** **Major GPA:** 4.0, **Cumulative GPA:** 3.98
Relevant Coursework: Data Structures, Analysis of Algorithms, Operating Systems and Parallel Algorithms, Automata and Computational Complexity, Object-oriented Problem-solving, Machine Learning, Statistical Modelling, Applied Statistics

Work Experience

Incoming Software Engineering Intern, Meta May 2024 – Aug 2024

Software Engineering Intern, Source Allies Sept 2023 – Dec 2023
- Reduced out-of-sample RMSE of time-series forecasting model by **83%** via data preparation and hyperparameter tuning
- Improved loading speed by 40% for website consuming inferences from real-time endpoint via server-side caching
- Increased unit test coverage from 21% to **78%** across the entire project repository using Pytest and Moto

Software Engineering Intern, Source Allies May 2023 – Aug 2023
- Built an AWS-based time-series forecasting pipeline to predict billable hours for deployed software consultants
- Accelerated release cycle by **60%** through streamlined infrastructure-as-code development and automated CI/CD
- Reduced downtime for real-time prediction endpoint by **90%** with automated model drift detection and retraining
- Earned an AWS ML Competency for the company by productionalizing this green-field project within **2 months**

Software Engineering Intern, National Center for Supercomputing Applications Sept 2022 – Dec 2022
- Built a Docker software environment that enables experimenting with authorization using JSON Web Tokens
- Reduced configuration overhead by 75% by integrating demo Flask endpoints with a token issuer using Docker Compose

Undergraduate Research Assistant, Systems and Languages Group at Grinnell College Mar 2022 – Sept 2022
- Developed a full-stack Next.js application to help undergraduate students write and validate mathematical proofs
- Expanded 2-fold the set of acceptable math expressions by building upon a TypeScript internal logic system
- Enabled proof-writing in a general-purpose language by implementing a parser from Python to math expressions

Projects

Sentiment Scorer [Website] – **First place** at 2022 Robinhood's Hackathon for Social Good
- Led a team of 4 to build a web application to evaluate sentiment of web-scraped news articles on DOW 30 companies
- Spearheaded the integration of a sentiment analysis model developed on Google Colab into internal Flask API endpoints
- Executed the design and implementation of a dynamic Next.js website for displaying visualizations of model outputs

GPU-Parallelized Neural Network Library
- Built a CUDA C library from scratch for creating accelerated neural networks via general-purpose GPU programming
- Sped up parallelized matrix multiplications by 20 times through memory coalescing and cache blocking
- Improved hyperparameter tuning speed by distributing tuning jobs across concurrent CUDA streams and kernels

Research

Snowflake: Supporting programming and proofs [Extended Abstract] – In proceedings of the 54th ACM Technical Symposium on Computer Science Education (SIGCSE TS 2023)

Identification of Effective Biomarkers in Predicting Survival of Patients with Severe Sepsis and Septic Shock [Paper] – Awarded **Second Prize**, Intermediate Statistics category, Undergraduate Class Project Competition (USCLAP 2022)

Certifications

Problem Solving, Python, React, JavaScript, SQL [PDFs] – HackerRank 2023
Intermediate Software Engineering [PDF] – CodePath 2022
Intermediate iOS Development [PDF] – CodePath 2023

Skills

Languages:	Python, C, C++, TypeScript, JavaScript, HTML, CSS, SQL, Swift, Java, R
Machine Learning:	PyTorch, Scikit-learn, Tensorflow, CUDA
Web Development:	React, Next.js, Node.js, Flask, Django, jQuery, TailwindCSS, Webpack, UIKit (iOS)
Tools & Services:	Pytest, Jest, Amazon Web Services, Moto, Git, GitHub Actions, Docker, SQLite