

DAVID GELODY

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EDUCATION

CARNEGIE MELLON UNIVERSITY

Bachelor of Science in Electrical and Computer Engineering

Pittsburgh, PA

Expected May 2026

- Minor: Computational Finance | GPA: 3.84
- **Relevant Coursework:** Differential Equations, Discrete Time Finance, Distributed Systems, Introduction to Computer Systems, Introduction to Mathematical Finance, Matrices and Linear Transformations, Monte Carlo Methods and Applications, Physics I/II, Principles of Imperative Computation, Probability Theory, Principles of Microeconomics, Signals and Systems

SPECIFICATIONS

- **Computer Skills:** Python, C, Rust, x86 Assembly, Linux, Git, Amazon Web Services, TensorFlow, Keras, NumPy, Word/Docs, PowerPoint/Slides
- **Personal Interests:** Baseball, Chess, Health and Fitness, Mathematics, Programming, Skiing, Soccer

WORK EXPERIENCE

SECURE SYSTEMS LAB, NEW YORK UNIVERSITY

Computer Engineering Research Intern

New York, NY

May 2024-Aug 2024

- Document and emulate 2000+ lines of Linux network system calls in Rust for an open-source library
- Integrate comprehensive test cases for networking system calls to thoroughly debug issues and enhance the operating system's security

CARNEGIE INSTITUTE OF TECHNOLOGY, CARNEGIE MELLON UNIVERSITY

Teaching Assistant, Physics I for Engineers

Pittsburgh, PA

Aug 2023-May 2024

- Hosted weekly office hours and assisted 20+ students in understanding Newtonian mechanics and thermodynamics
- Graded 20+ students' weekly problem sets, providing accurate evaluation and feedback

ROBOTICS LAB, NEW YORK CITY COLLEGE OF TECHNOLOGY

Machine Learning Research Intern

New York, NY

May 2023-Aug 2023

- Preprocessed Microsoft's COCO dataset of 80,000+ images to train machine learning model in Python with TensorFlow and Keras to identify common objects with greater than 92% accuracy
- Managed team of three interns to collect and preprocess over 1000 videos of common American Sign Language phrases utilizing OpenCV
- Developed machine learning models in Python with TensorFlow, Scikit-learn, and Keras on AWS SageMaker to predict American Sign Language phrases with accuracies above 90%

PROJECT EXPERIENCE

NETWORK HTTP PROXY, CARNEGIE MELLON UNIVERSITY

Nov 2023-Dec 2023

- Implemented HTTP proxy in C to handle client requests by utilizing low-level socket library and performing low level I/O calls with error detection and multithreading

TINY SHELL, CARNEGIE MELLON UNIVERSITY

Nov 2023-Nov 2023

- Developed Linux shell program in C that supports simple form of job control and I/O redirection through process control and signal handlers

MALLOC, CARNEGIE MELLON UNIVERSITY

Oct 2023-Nov 2023

- Implemented malloc, calloc, realloc, and free functions from stdlib library in C by adapting segregated list structure to efficiently manage memory and maximize throughput

AIRFARE FORECASTER, CITADEL SUMMER INVITATIONAL DATATHON

July 2023-July 2023

- Visualized over 10 datasets, including previous stock prices and airline fare, in Python with Pandas and Matplotlib
- Predicted future United Airlines airfare through multivariate time series forecasting in Python using Keras and NumPy
- Evaluated daily prediction accuracy over three-year period, achieving a root mean square error of \$34