Gavin Cheung

gavin.cheung12@gmail.com | (978)-505-3187 | Boston, MA | linkedin.com/in/gavcheung | [personal website](#)

EDUCATION

Rensselaer Polytechnic Institute   **Troy, NY**
   B.S in Computer Science (concentration in Data Science & ML)   Expected 2028
Relevant Coursework: Computer Architecture, Operating Systems, Data Structures, Discrete Math, Calculus, Statistics
Current Coursework: Mathematical Foundations of ML, Intro the Algorithms, Principles of Software

EXPERIENCE

Machine Learning and Back End Developer   **Aug 2025 - Present**
Rensselaer Center for Open Source   Troy, NY
- Developed data pipeline to process 40,000+ in-game scenarios through a series of Scikit-Learn random forest models
- Engineered 2,400+ lines of code across 21 commits to an open-source ML sports data project, focusing on feature engineering and UI/UX redesign to achieve 90%+ model accuracy and smooth user experience
- Managed project lifecycle using Scrum/Agile methodologies, version control, documentation, and good coding practices

Research Technology Intern   **May 2025 - Aug 2025**
HARP Research Inc.   Troy, NY
- Optimized inference latency for Reduced Order Models (ROMs) by benchmarking 10,000+ nodes in under 3 seconds through python-based performance profiling.
- Containerized a multiphysics environment using Docker, reducing system configuration time by over 55%
- Co-authored a technical paper on Optimization Methods, synthesizing research on Dynamic Assembly algorithms to identify performance trade-offs in Topology Optimization.

IT Assistant   **May 2024 - Aug 2024**
Veterans Association Medical Center   Bedford, MA
- Designed and implemented an automated barcode scanning system, streamlining the expired medication return process and increasing operational speed by over 200%.
- Identified and capitalized $10,000+ in expired drug credit through database matching and expiration tracking

PROJECTS

PharmaScheduler | React, Vite, TypeScript, Tailwind
- Developed a React/TypeScript pharmacy scheduling app automating staff management for 20+ employees
- Built data synchronization system with JSON merge/replace functionality, reducing cross-device schedule conflicts
- Designed a functional interface with Tailwind CSS, maximizing efficiency and providing a seamless user experience

Multi-threaded UDP Server Encoder/Decoder | Linux, C++
- Engineered a high-performance multi-threaded C++ application in a Linux environment, implementing concurrency techniques to handle simultaneous data streams.
- Optimized system throughput and performance by 30% through memory management and socket programming.
- Utilized system-level concepts to ensure thread safety and minimize latency during real-time data encoding/decoding

LEADERSHIP & INVOLVEMENTS

Python Instructor | coding&&community
- Deliver weekly Python lessons to 7th–12th graders, simplifying complex concepts into an accessible curriculum.

Club President | RPI Sports Analytics Club
- Leading Sports Analytics Club, overseeing technical development of data driven, machine learning projects and workshops while managing club operations and communication.

Public Relations | Pi Kappa Alpha & Club Soccer
- Managing digital outreach and event coordination for Club Soccer and Fraternity, driving 54,000+ monthly views

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, Java, C, JavaScript, R, CSS, HTML, Pandas, NumPy, Matplotlib
Tools: Git, VSCode, Github, React, Scikit-learn, Autodesk Fusion 360, Docker, Excel, PowerBI