

Gavin Cheung

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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

EXPERIENCE

Machine Learning and Back End Developer

Aug 2025 - Present

Rensselaer Center for Open Source

Troy, NY

- Developed data analytics pipeline to process 40,000+ in-game scenarios through a series of Scikit-Learn models
- Engineered 2,400+ lines of code across 21 commits to an open-source ML sports data project, focusing on backend variable calculation 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

- Containerized a multiphysics environment using Docker, reducing system configuration time by over 55%
- Developed Python script to access accuracy between Reduced Models processing 10,000+ nodes in under 3 seconds.
- 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

SEO EDGE Participant | SEO Career

- Selected for an intensive multi-week professional development program focused on technical interview preparation, resume optimization, and 1-on-1 career coaching to secure internships with corporate partners.

Python Instructor | coding&&community

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

Public Relations | Pi Kappa Alpha & Club Soccer

- Managed social media and alumni outreach for Club Soccer and Fraternity, driving 54,000+ monthly views combined

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, Java, C, JavaScript, R, CSS, HTML, Pandas, NumPy, Matplotlib

Tools: Git, VSCode, Github, React, Scikit-learn, Docker, Excel, PowerBI

Soft Skills: Communication, Leadership, Project Management, Problem Solving, Adaptability, Creativeness, Curiosity