

Frank Zhou

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Education

Cornell University, College of Arts & Sciences

Ithaca, NY

Bachelor of Arts in Computer Science and Mathematics, **GPA: 4.00/4.3**

Expected May 2025

Related Courses: Object-Oriented Programming & Data Structures (Java), Multivariable Calculus, Linear Algebra, Discrete Structures, Intro. Machine Learning, Web Development, Data Structures and Functional Programming (OCaml)

Jericho High School

Jericho, NY

Regents Diploma with Advanced Designation & Honors Math and Science, **GPA: 4.17/4.3**

September 2021

Activities: National AP Scholar, VEX Robotics World Championship Finalist, Coding Club Vice President

Programming Languages: Python, Java, JavaScript, OCaml

Technologies: React, Flask, SQL, Node, Git, Bash, Figma

Highlights

- **2+ years** of real-world experience building high-performance practical applications using Python and Java
- Built, documented, and supported distributed backend frameworks with functional **APIs** and **database** connectivity

Professional Experience

Machine Learning Co-Lead

September 2022-Present

Cornell University Sustainable Design: Currents

Ithaca, NY

- Leading a team of 15 to work on incorporating high-efficiency sensors, various tracking technologies, and machine learning to automate HVAC in classrooms at Cornell.
- Build an algorithm to determine the temperature mode to set a given room based on the current data from the user's calendar.
- Expect to save **14,355 kWh** and **\$1,046.46 annually** for LEED Platinum Certified Building such as Upson Hall

Teaching Assistant

August 2022-Present

Cornell: Introduction to Computing in Python, Object-Oriented Programming and Data Structures

Ithaca, NY

- Held office hours, graded assignments, and collaborated alongside students 7+ hours weekly
- Helped students develop an in-depth understanding of programming and the fundamental principles of software development
- Led weekly discussion sections of **30+** students to strengthen students' understanding of computer science

Frontend Engineer

December 2021-Present

Cornell Finance Round Table Club

Ithaca, NY

- Built and deployed a dynamic website using **HTML**, **CSS**, and **JavaScript** with **2,000+ visits**
- Integrated **PostgreSQL** to store club members' information and used **Firebase** to authenticate club members

Data Analyst Intern

July 2021-August 2021

DHVC Venture Capital

Remote

- Performed data cleansing and transformation using **SQL**, and **Python** to generate insight from client-provided data
- Presented investments and technical ideas to **stakeholders** and industry **executives**

Project Experience

Algorithmic Trading Bot (Python) - *Algorithmic Trading using Interactive Broker's Python API*

- Designed and deployed **trading strategies** on Interactive Broker's platform using the **Python API**
- Extracted data, performed technical analysis, and deployed **backtesting** strategies using **multithreading** and **locks** to ensure asynchronous order executions

Potato Disease Classification (Python, React Native, Tensorflow) – *End-to-end deep learning project using Tensorflow*

- Used **TensorFlow dataset** and **data augmentation** to pre-process data for **convolutional neural network** image training
- **Optimized** the model using **quantization** and **Tensorflow lite** to minimize memory usage and maximize inference speed
- Deployed the model to **GCP** to serve a mobile application built with **React Native** which allows client-side interaction

Meat By Receipt (Swift, Python, Google Cloud, Figma)- *Created for Cornell Big Red Hacks ([Link](#))*

- Won Best Use of Google Cloud out of 204 Competitors for a full stack IOS app that aims to help reduce meat consumption
- Track meat consumption by simply taking a picture of shopping receipts using **Google OCR** and **Google VM**
- Created app branding, high-fidelity designs, and prototype in Figma in 36 hours

Project Euler (Python) – *Collection of Solved Project Euler Computational Math Questions*

- Used graph search algorithms, dynamic programming, combinatorics theory, etc to solve **20+** computational problems
- The highest difficulty problems having **under 5000 accepted solutions** along with **sub-1-second** runtimes

Extracurriculars

eHacks Virtual Hackathon

Jericho, NY

Co-founder

May 2020-October 2020

- Organized two virtual hackathons during the summer and fall of 2020 which hosted over **250 participants**
- Built a full-stack web app to allow participants to access video tutorials and interact with programming exercises

- Led and managed a team of **15 volunteers** in sourcing industry professionals to guide and judge participants