

# Frank Zhou

fcz5@cornell.edu | [linkedin.com/in/frank-zhou1](https://www.linkedin.com/in/frank-zhou1) | [github.com/FZcuber](https://github.com/FZcuber) | [fzcuber.github.io](https://fzcuber.github.io)

## EDUCATION

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### Cornell University

Ithaca, NY

*Bachelor of Arts in Computer Science and Math, GPA: 3.85/4.00*

*May 2024*

- Related Courses: Analysis of Algorithms (CS 4820), Machine Learning (CS 4780), Functional Programming (CS 3110), OOP and Data Structures (CS 2110), Linear Algebra (MATH 4315), Discrete Structures (CS2800)

## EXPERIENCE

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### Machine Learning Subteam Lead

Sep. 2022 – Present

*Cornell University Sustainable Design*

*Ithaca, NY*

- Lead a team of 15 to work on incorporating high-efficiency sensors, various tracking technologies, and machine learning to automate HVAC in classrooms at Cornell
- Designed a neural network that sets the optimal temperature for rooms according to calendar entries of users
- Estimated to save over 14,000 kWh and \$1,000 annually for LEED Platinum Certified Building such as Upson Hall

### Undergraduate Teaching Assistant

Aug. 2022 – Present

*Cornell University: CS1110 (Intro. CS), CS2110 (OOP and Data structures)*

*Ithaca, NY*

- Assist students in learning and applying data structures and algorithms using Java
- Design and grade assignments, quizzes, and exams that test students' understanding and implementation
- Lead weekly group sessions with more than 30 students to improve understanding

### Frontend Engineer

Dec. 2021 – May 2022

*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

June 2021 – Aug. 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

## PROJECTS

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### Meat By Receipt | *Swift, Python, Google Cloud, Figma*

Oct. 2022

- Won Best Use of Google Cloud out of 204 Competitors for a full stack IOS app that 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

### Oasis Cube | *OCaml*

Sep. 2022 – Dec. 2022

- Collaborated in a group of 3 using agile programming methods to iteratively develop and deliver a fully functional virtual Rubik's Cube simulator using OCaml Graphics
- Enables users to customize and visualize Rubik's Cubes (2x2 and 3x3 puzzles) in different dimensions and modes

### Algorithmic Trading Bot | *Python*

June 2022

- 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

### Project Euler | *Python*

June. 2022-current

- Solved and optimized 50+ computational problems with problems having under 5000 accepted solutions
- Used dynamic programming, graph theory, linear algebra, combinatorics / probability theory, linear algebra etc

## TECHNICAL SKILLS

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**Languages:** Python, Java, OCaml, SQL (PostgreSQL), Bash, JavaScript, HTML/CSS

**Frameworks:** React, Node.js, Flask, JUnit

**Developer Tools:** Git, VS Code, Visual Studio, IntelliJ, Eclipse

**Libraries:** pandas, NumPy, PyTorch