

# Miranda Luo

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## Education

### Cornell University

Ithaca, NY

*Bachelor of Arts in Computer Science and Biological Sciences, GPA - 3.87*

*expected May 2024*

- **Relevant Coursework:** Object Oriented Programming & Data Structures, Discrete Structures, Functional Programming, Intro to Backend, Trends in Web Development (Fall 21: Algorithms, Data Driven Web Apps)
- **Clubs:** Association of Computer Science Undergrads, Women in Computing, Running Club, Marching Band

## Technical Skills & Awards

**Languages:** Java, Python, JavaScript/TypeScript, PHP, C++, OCaml, SQL (Postgres, MySQL), R

**Frameworks:** Django, Ruby on Rails, Flask, Laravel, Node.js, React, Bootstrap, MaterialUI, WordPress

**Libraries/Technologies:** HTML/CSS, Git, Heroku, RESTful APIs, pandas, NumPy, scikit-learn

**Awards:** Aspirations in Computing Certificate of Distinction (National Center for Women & IT), Computing Awards Honorable Mention (New Jersey Regional Science Fair), Dean's List

## Experience

### Cornell University

Ithaca, NY

*Cornell Design & Tech Initiative - Developer*

*September 2021 – Present*

- Implementing match UI functionality on Zing, a tool for professors to intelligently form groups of students

*Data Structures and Functional Programming Consultant*

*August 2021 – Present*

- Holding 3 consulting hours a week to help 6 students per hour with assignments (400+ students in class)
- Grading assignments and exams and managing/assisting 2 groups for their final projects

*Cornell Cup Robotics - Minibot CS Software Developer*

*March 2021 – September 2021*

- Revamped Minibot UI/UX, a robot for children to learn about robotics, using React and Figma
- Eliminated excessive page scrolling/whitespace and reduced distance between elements by about 50%

### Workstream

San Francisco, CA

*Full-stack Software Engineering Intern*

*June 2021 – August 2021*

- Developed state tax withholding form UI & HelloSign signing onboarding module for over 100 businesses
- Designed/wrote APIs for dynamic search of ADP workers and extra data submission through form to ADP
- Resolved bugs and high priority tickets as reported by customer service, wrote tests for backend

### Kadmon

New York, NY

*Molecular Signaling Summer Intern*

*June 2019 – July 2020*

- Predicted positive protein crystallization conditions with 90% accuracy of prediction over last generation with reinforcement learning algorithms
- Researched and presented basic machine learning findings for use in drug development to the department
- Experimented with protein modeling and molecular dynamics using Molecular Operating Environment (MOE)

## Projects

**FRC Robotics Scouting Server** | *Laravel, MySQL, Bootstrap* - [github.com/mluo24/pascack-pioneers-scouting-2020](https://github.com/mluo24/pascack-pioneers-scouting-2020)

- Led a team of 3 to develop database for over 80 users to upload and share strategic robot scouting information
- Designed innovative form to associate form elements with corresponding locations on game field visually
- Implemented Google OAuth & system for searching/exporting 100s of lines of data formatted for analysis

**Cornell Simulator (Game)** | *OCaml* - [github.com/mluo24/CornellSimulator](https://github.com/mluo24/CornellSimulator)

- Created a 2-D tile-based single-player game simulating the life of a college student
- Implemented and optimized a tileset engine to easily create game maps with separate interactive layers
- Designed and integrated a mission/leveling up system with GPA calculation and item collection/usage

**Improving Semi-quantitative Colorimetric Test Kits** | *Python* - [github.com/mluo24/p-colorimetric-analysis](https://github.com/mluo24/p-colorimetric-analysis)

- Developed algorithm to determine concentration of phosphorus solutions through generated absorbance curves of known solutions and smart phone pictures
- Analyzed association of RGB values and solution absorbance to true concentration, determined 90% fit