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
- 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
- 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
- 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