

# Ziyi Lu ←

Seeking **Software** position

Berkeley, CA 94720

@: [lzy\\_1006@icloud.com](mailto:lzy_1006@icloud.com)

T: +1 510-495-7161

GitHub: [github.com/lzy-106](https://github.com/lzy-106)

Website: [lzy-106.github.io](https://lzy-106.github.io)

## Education

---

**University of California, Berkeley**, Graduating Dec 2021

Computer Science BA & Astrophysics BA, **GPA:** 3.764 / 4.0

**Coursework:** Software Engineering, Computer Architecture, AI, Algorithms, Computer Security, Machine Structures, Data Structures, Informational Systems, ...

## Skills

---

1. **Languages:** Python, C, JavaScript, Java, SQL, RISC-V assembly
2. **Technologies:** Ruby on Rails framework, git, Flask, Heroku, NumPy, Matplotlib
3. **Methodologies:** Agile team development, Object-Oriented Programming (OOP), REST, Test-Driven Development (RSpec & Cucumber), Test automation, SaaS

## Work

---

**Amazon, Software Development Engineer Intern**, 2021-6 – 2021-9

1. Mobile Shopping Foundation – Core Services team. All mobile dev depends on us.
2. Building an automatic documentation generator for the internal code build pipeline.
3. Anticipated to serve thousands of internal customers working on the Amazon app.

**Undergrad Student Instructor**, UC Berkeley 2020-8 – 2020-12

1. Taught Optical & Infrared Astronomy Lab to 20 junior & senior students for 8h / wk.
2. Gave tutorials on scientific computing tools & how to write clear, optimised code.
3. Held office hours, often answering questions about programming in Python.

## Open-source Contributions & Projects

---

**Reci.tech**, Python / Flask Web app for the HackPSU Hackathon, 2021-3

1. Conceived & built a web app to compare spoken and written sentiments in a line.
2. Curated and led a team of 5 across 4 time-zones over 2 days to build the product.
3. Worked on the Python / Flask back-end, Bootstrap front-end, and deployed to Heroku.

**Snap!Con**, Ruby on Rails web app in an Agile team of 5, 2021-1 – 2021-5

1. Open-source framework for programming education conferences. 600 attendees yearly.
2. Worked in an Agile team as a web developer, under the Ruby on Rails framework.
3. Won Best Project of the Semester, as selected by a panel of Y-Combinator alumni.

**Secure File-sharing System on a Hostile Storage in Golang**, 2020-11 – 2020-12

1. Designed & implemented an encrypted file sharing system in a team of 2.
2. Designed multi-user file-sharing & selective revocation into the service.
3. Used Golang & interfaced with cryptography & storage APIs.

**Optimised Linear Algebra Module in C**, 2020-4 – 2020-5

1. Implemented a C maths module for linear algebra.
2. Optimised it with various techniques like cache-blocking & loop-unrolling.
3. Achieved ~7x performance for the matrix power operation.

**Git-like Version Control System in Java**, 2019-11 – 2019-12

1. Designed and implemented an Objected-Oriented architecture in Java.
2. Utilised Java built-in serialisation and I/O for git-like data persistence.
3. Implemented complex tree operations including *branch* and *merge*.

## Research

---

**Cell-based Galactic H-alpha/beta Line Radiative Transfer Simulation**, 2019-5 – 2019-8

1. Cell-based Monte-Carlo numerical simulator of photon random walks in a galaxy.
2. Expanded legacy simulator in C, data processing & visualisation in Python.
3. Generated & processed ~15GB of photon data.