# Jamie Ip

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## Education

**University of California, Berkeley** *Berkeley, CA*

Bachelor of Arts in Computer Science, Minor in Data Science *Expected Graduation: May 2022*

- **GPA:** 4.00/4.00
- **Honors:** Member, Upsilon Pi Epsilon
- **Coursework:** Data Structures, Algorithms, Artificial Intelligence, Neural Networks, Operating Systems, Computer Architecture, Computer Graphics, Teaching Computer Science, Data Science, Ethics of Data Science, Discrete Mathematics, Probability Theory

## Skills

**Languages**   Python, Java, C++, C, HTML, CSS, Javascript, SQL, Assembly, Scheme, LaTeX

**Tools**   Git, Amazon Web Services, Keras, Tensorflow, PyTorch, Pandas, Numpy, Unity, Microsoft Office, Adobe Creative Cloud

## Experience

**Amazon** *Seattle, WA*

Software Development Engineer Intern *May 2021 - August 2021*

- Engineered a web application to streamline Account Integrity team workflow, reducing service on-boarding time by over 300%, saving an estimated $350k per year by preventing clients from stalling on months of data retrieval and analysis
- Taught myself AWS and React in 3 months to lead full stack development of a data visualization service launched company-wide, using AWS Lambda with Java to produce statistics and charts in Microsoft Excel, stored with S3 and accessed with an HTTP API

**Goodly Labs** *Berkeley, CA*

Software Development Engineer Intern *August 2020 - May 2021*

- Optimized algorithms and modernized databases using Python data processing libraries, improving overall runtime by 10%, for the Public Editor web application utilized daily by thousands of volunteers for labeling media misinformation
- Directed the algorithms team of 7 members to overhaul back end scripts and build over 50 unit tests for accelerating development

**Center for Law, Energy & the Environment** *Berkeley, CA*

Research Intern *August 2020 - December 2020*

- Analyzed 10k sources from the Web of Science on the digital economy, using Python and data visualization tools to discover major trends, focus areas, and future trajectories to create 30 interactive visualizations of unstructured big data
- Satisfied stakeholders by delivering weekly presentations explaining and comparing the results of 5 industrial visualization tools

**Berkeley Institute for Data Science** *Berkeley, CA*

Research Intern *September 2019 - August 2020*

- Investigated 200 machine learning research papers from a wide variety of scientific disciplines to identify and visualize statistics on the reliability of machine learning training data, co-authoring a publication in renowned academic journal MIT Press
- Developed functions using Javascript and Python to automate manual procedures, increasing team productivity by over 50%

**Computer Science Mentors** *Berkeley, CA*

Senior Content Mentor *September 2019 - May 2021*

- Trained team members to design weekly problem sets on Python, SQL, and Scheme using LaTeX, producing 15 worksheets over 4 months for mentoring over 400 students per semester in UC Berkeley's introductory computer science class
- Designed Python scripts for transforming LaTeX problems into Python files and for organizing a corpus of over 400 problems into an easily accessible database to spearhead new initiatives on content creation and standardization

## Projects

**Reinforcement Learning Agents**

- Implemented back end code for value iteration and Q-learning algorithms for self-learning Crawler and Pacman artificial intelligence agents using Python, simulating the environment as an unknown Markov Decision Process

**Phlow**

- Won first place out of 10 teams in a two day hackathon at UC Berkeley by working with four developers to build a 2D endless runner variant of Snake, with original art and music, created using Unity and C#