

# BURWIN LIU

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## Education

### University of California, Irvine

June 2022

Bachelor of Science, Computer Science

GPA: 3.94

**Relevant Coursework:** Algorithms and Data structures, Programming in Python, Programming in C++, Artificial Intelligence, Machine Learning, Information Retrieval, Computer Hardware and Organization, Linear Algebra, Discrete Mathematics

**Honors:** Dean's Honor's List (6 quarters)

## Skills

**Technical Languages:** Python, C++, C, JavaScript, Java

**Skills:** Data Structures and Algorithms, Version Control (Git), Object Oriented Programming, Cloud Computing Technology, Linux/Unix, Relational Databases (MySQL, Postgres), Android Application Development, JavaScript Web Framework, Machine Learning, Computer Vision, Microsoft Office

## Experience

### Network Alignment Researcher (UCI Independent Research on Graph Algorithms) March 2020 – Present

- Compiled a database of Orthologs (Related Genes/Nodes between two graphs, found through biological research) of over 200 GB from over 25 separate data sources
- Discovered over 40 competing alignment algorithms and compiled and parsed over 10 those algorithms to compare performance against created Local Network Alignment algorithm
- Mentored a fellow undergraduate researcher and assisted in familiarizing a newcomer with established systems

## Hackathon Projects

### HackUCI

February 2020

- Led a team of four in Android development, teaching first time hackers about version control, team-based development and other essential technology development
- Augmented leadership and communication skills through communicating unfamiliar concepts to first time Hackers

### SDHacks

October 2019

- Used technology to turn photos into usable data for future analysis
- Led a team of three in developing a web application, designing tasks and subdividing workload
- Inspired hope during times of low morale and boosted productivity to meet deadlines
- Developed back-end server with flask, scaled and deployed with Cloud Computing technologies

## Independent Projects

### JPEG-Viewer

June 2019 - Present

Lead Developer, Creator

- Leveraged Django and OpenCV, implementing a prototype server, remote client and web interface.
- Applied these technologies into a mpeg-2 streaming service and Computer Vision program to detect human faces
- Enhanced understanding of web-frameworks to augment project development, applying skills learned in class and finding a deeper understanding of technology available to developers
- Developing a website to stream a webcam feed, recording and encoding video to be streamed