

# BURWIN LIU

(949) 607-8804 | burwinliu1@gmail.com | burwinliu.github.io | Aliso Viejo, CA, 92656

## 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

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

## Skills

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

**Skills:** Data Structures and Algorithms, DevOps (CI/CD / GitHub Actions), Version Control (Git), Cloud Computing Technology (AWS), Linux/Unix, Relational Databases (MySQL, Postgres), Application Development (Android, Electron), JavaScript Frameworks (React, Vue), Machine Learning (Computer Vision)

## Experience

### Schneider Electric

July 2020 – September 2020

Intern

- Designed POC cross-platform GUI application, implemented Git features such as HTTP(S) and SSH cloning, Diffing, Branching, Merging and History using Electron, React and Redux
- Converted High Level Objectives into rapid prototypes; presented and provided reports to Senior Software Engineers on viability, CVSS security and features of Distributed Version Control/Git
- Enacted HTML Web server application with OSI model, Sockets, HTTP and TCP/IP in C++
- Studied Agile engineering practices of decomposing project execution into sprints, daily scrum meetings and rapid prototyping
- Learned how IoT and virtualization would impact industrial automation's future from top executives

### UC Irvine

March 2020 – June 2020

Undergraduate Researcher (Network Alignment Researcher)

- Compiled a database of orthologs (Related Genes/Nodes between two graphs, found through biological research) from various sources, writing bash scripts and SQL queries to parse through over 200 GB of data from over 25 separate data sources for analysis by UCI Researchers
- Analyzed over 40 competing alignment algorithms, parsed over 10 those algorithms to benchmark performance against in house Local Network Alignment algorithm for data in Research Paper

## Independent Projects

### Raspi-Interface

July 2020 - Present

Lead Developer, Team of 3

- Created a Raspberry Pi system control web-interface via client-server model, Typescript and React (Front-End), Python and Flask (REST API Backend), and GitHub Actions (CI/CD)
- Produced customized build scripts for testing and building, automating hours of testing
- Continuous Agile meetings with project refinement, DevOps development and progress reports

## Hackathon Projects

### SDHacks

October 2019

- Implemented a Computer Vision Android application, converted Image data into calendar events, led a team of three, subdivided application and front-end development workload to teammates
- Developed system design, back-end server with Flask, deployed with cloud computing (AWS EC2, S3)
- Leveraged computer vision (via AWS Rekognition API) to extract data from images, created responsive REST API backend, orchestrated cloud computing services to parse uploaded images