

# Robin Simpson

818-797-8710 | srobinlee.teachmetw@gmail.com | teachmetw.github.io | github.com/TeachMeTW | linkedin.com/in/robin-simpson-tw/

## Education

### Diablo Valley College

AS in Electrical and Computer Engineering  
GPA - 3.9

Pleasant Hill, CA

Expected 2023

## Work Experience

### Argonne National Laboratory

Intern

Remote - Lemont, IL

June 2022 - Aug 2022

- Create synthetic replications of industrial control system infrastructure in virtualized and cyber-physical tasking.
- Develop a standalone application that geolocated and simulated critical infrastructures within any area.
- Utilized deck.gl, cytoscape.js, dash, heroku, and python in order to create a 3D arc and heatmap for datasets.
- Implemented web scraping for data collection and provided manual user input.
- **Technical Skills:** Python with Pydeck, NumPy, Matplotlib, Pandas, Git/Gitlab, Heroku, Cytoscape.JS, Deck.GL, JSON, CSV.

### Steam Coders

Assistant Instructor

Pasadena, CA

Feb 2022 - June 2022

- Teach computer science to students K-12 ranging from beginner to advanced levels.
- Assist the main instructor in preparing class syllabus, lesson plans, and other materials.
- Educate students in 8-16 week programs in both 1-1 tutelage to 20+ students.
- Instruct with Python, Java, C++, and Scratch depending on curriculum.
- **Technical Skills:** Python, Java, C++, Scratch, CodeSparks, JS

## Projects

### Facial and Object Recognition

Sep 2022 - Current

Project Bracket

- Developed a web application which takes in user camera input or image input that detects faces or images depending on training data.
- Utilizes a React.JS frontend and a Django backend.
- Trained a machine learning model with OpenCV, LabelMe, and TensorFlow.
- **Technical Skills:** Python, JS, OpenCV, TensorFlow, React, Django, Git

### 3D Visualization of DOE 16 Critical Infrastructures

Jun 2022 - Aug 2022

Argonne National Laboratory

- A web application that scrapes and geolocates data regarding critical infrastructures with/without a set scope.
- Data is mapped via arcs or a heatmap with respective legend.
- Features a unity 3D simulation developed in C# that exhibits infrastructure connections.
- **Technical Skills:** Python, Deck.GL, Cytoscape.JS, Heroku, Unity, C#, Pandas, Matplotlib, Gitlab

### teachmetw.github.io

2021 - Present

Self Project

- Showcase of works and projects with images, videos, and explanations.
- Features info, resume, projects, and contact information.
- **Technical Skills:** HTML, CSS, JS

### SQL Remake

PCC

- App that creates databases from scratch or read existing txt files in SQL format.
- Reads SQL commands from file or user input.
- Utilized data structures that were built from scratch such as maps, tokenizers, parsers, queues, trees, etc.
- **Technical Skills:** C++, Git, CMake, Build

## Skills

**Programming** Python (Pandas, PyTorch, NumPy, Scikit-learn, TensorFlow, etc.), C/C++, HTML/CSS, JavaScript, SQL, Git, VSCode

**Miscellaneous** CNC, CAD/CAM, Autodesk, HAAS Milling/Router/Lathe, 3D Systems and Modeling, SketchUp, AutoCAD

## Other Experiences

---

### **Project Bracket**

Project Dev Lead

- Led a team of up to 15 developers to create projects in a variety of topics such as AI and Machine Learning.
- Utilized Git and Github for team development coordination and management.
- Developed under a 16-week deadline for a final deliverable that is showcased.

### **CFYF**

Lead/Officer

- Assist students in preparing a path in CS/E via workshops on a weekly basis.
- Host resume reviews, project creation, leetcode, and interview prep.
- Educate in networking and provide resources to aspiring developers.

### **DVC Google Dev and Hacking Club**

Member

- Developed programs and attend hackathons in a team of 4-5
- Attend development workshops such as Mobile Development via Android Studio and Node.js

### **MESA**

Tutor/Member

- Tutor students in Math (Calc to Discrete), Sciences (Chem and Phys), and CS.
- Volunteer for the MESA community and events, and attend AEW Workshops.

### **GCC/CSUN/CMHS**

Student

- NIMS Certification in CNC CAD/CAM, Milling, and Lathe
- Operated HAAS Super Mini Mill 2, HAAS DS-30y, Lathes, CNC Router.
- 3D Engineering Systems: Makerbot 3D, Formlabs 3L, Createbot F1000.

**References available upon request.**