

# Robin Simpson

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

## Education

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### Diablo Valley College

Computer Science and Engineering

Pleasant Hill, CA

Transferring 2023

## Work Experience

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### Argonne National Laboratory

Intern

Remote - Lemont, IL

June 2022 - Aug 2022

- Developed 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 data collected via scraper or manual input.
- Features a unity 3D simulation developed in C# that exhibits infrastructure connections and impact.
- **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

- Instructed computer science topics to students K-12 both remote and in person.
- Assisted the main instructor in preparing class syllabus, lesson plans, and course materials.
- Showcased Python, Java, C++, and Scratch depending on curriculum.
- **Technical Skills:** Python, Java, C++, JS

## Projects

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### Facial and Object Recognition

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

### SQL Remake

PCC

- Developed a program that creates databases from scratch or read existing txt files in SQL format.
- Built a custom parser that reads SQL commands from file or user input which can modify existing or new entries.
- Utilized data structures that were built from scratch such as maps, tokenizers, parsers, queues, trees, etc.
- **Technical Skills:** C++, Git, CMake, Build

### Portfolio Website

Self

- Implemented a showcase of works and projects with images, videos, and description via HTML/CSS.
- Hosted via github pages, features information, resume, projects.
- **Technical Skills:** HTML, CSS, JS

### UniLinked/OnlyBikes

MakeUC/TigerHacks

- Utilized Django to develop a web chat app and bike hosting platform within 36 hours.
- Coordinated project design with 2 other participants via git.
- Developed both front and backends.
- Deployed external API's such as Auth0 for login, Twilio for notifications, and TensorFlow for bike recognition.
- **Technical Skills:** Python Django, Tensorflow, Auth0, Twilio, Heroku, PostgreSQL, Git, OpenCV

## Skills

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**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

**References available upon request.**