

# Robin Simpson

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## EDUCATION

### Diablo Valley College

Pleasant Hill, CA

**Major:** Computer Science and Engineering – with intent to transfer to a 4-year university.

May 2023 (Expected)

**Relevant Coursework:** Assembly Lang/Computer Org , Object Oriented Programming, Data Structures and Algorithms

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## EXPERIENCE

### Argonne National Laboratory

Lemont, IL

Data Science Intern

June 2022 – Aug 2022

- Developed a standalone application that geolocated and simulated critical infrastructures.
- Utilized cytoscape, deck.gl, heroku, and python in order to display a 3D arc/heat render of dataset.
- Implemented data scraping location data using beautifulsoup as well as manual user input stored in PostgreSQL.
- Codesigned unity 3D simulation of infrastructure connections.
- **Technical Skills:** Python, Pydeck, Numpy, Pandas, Git, Heroku, Cytoscape, JSON, CSV

### Steam Coders

Pasadena , CA

Assistant Instructor

February 2022 – June 2022

- Instructed computer science topics to students K-12 on-site and remotely.
  - Assisted the main instructor in preparing class syllabus, lesson plans, and course materials.
  - Demonstrated Python, Java, C++, and scratch depending on grade level and curriculum.
  - **Technical Skills:** Python, Java, C++, Javascript
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## PROJECTS

### SQL Remake

PCC

- Developed a program that can read and write data into txt files in SQL format using SQL commands.
- Built a parser using state machines and tokenizer, and the algorithm utilizing multimaps and other data structures.
- Features standard SQL commands; select, create, update, insert, drop.
- Integrated automatic batch line processor as well as manual command input.
- **Technical Skills:** C++, Git, CMake, Google Test/GTest

### ARID

Stanford Tree Hacks

- Built a secure document, image, video, and model viewer based on ARUCO codes.
- Integrated OpenCV to generate a unique code that corresponds to uploads and provide authentication via Twilio.
- Transposes files onto generated ARUCO code via homography matrix and transforms.
- **Technical Skills:** Python, Django, TensorFlow, Twilio, AWS Lightsail, PostgreSQL, Git, OpenCV

### OnlyBikes

University of Missouri Tiger Hacks

- Utilized Django + PostgreSQL in order to store bike objects with user and bike data.
- Trained 1000 images of bikes using LabelMe and SSDMobileNet alongside OpenCV for recognition software.
- Deployed external API's such as Auth0 for login, Twilio for notifications, and published on the cloud using Heroku.
- **Technical Skills:** Python, Django, TensorFlow, Auth0, Twilio, Heroku, PostgreSQL, Git, OpenCV

### VReader

Metaverse Hacks

- Devised a VR book reader on the Meta Oculus Quest 2 using Lua.
  - Developed an API implementation of a 60,000 public book domain library Project Gutenberg into Roblox.
  - Utilized JSON integration of Gutendex API to generate readable book objects.
  - **Technical Skills:** Lua, Gutendex API, ProjectGutenbergAPI, Roblox Studio, Git
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## Skills

**Programming:** Python, C++, HTML/CSS, SQL, Git, Tensorflow, Django, Google Cloud, Heroku

**Miscellaneous:** CNC, CAD/CAM, Autodesk, HAAS Router/Mill/Lathe, 3D Systems and Modeling, SketchUP, AutoCAD