MATT GOTTLIEB

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EDUCATION

University of California, Santa Barbara

Class of 2020

- Major: Computer Science, B.S.
- Relevant Courses: Advanced App Programming (CS56), Mobile Application Development (CS184), Introduction to Computational Science (CS111), Data Structures and Algorithms I & II (CS130A/CS130B), Computer Communication Networks (CS176A), Human-Computer Interaction (CS185), Operating Systems (CS170), Fundamentals of Database Systems (CS174A), Artificial Intelligence & Machine Learning (CS165A/CS165B)

EXPERIENCE

Tragedy of Commons Multiplayer Simulation Game — **Santa Barbara, CA**

Web Application — *Jan 2020 - Apr 2020*

- Created Implemented a multiplayer simulation game for Professor de Vries which is used in his CHEM123 classes at UC Santa Barbara as an interactive learning tool for his students. This application uses Node.js for the backend with the assistance of the Express.js framework to handle routing and middleware, mySQL for the database, and Embedded Javascript for the Front-end.

Ocean Recoveries Lab — **Santa Barbara, CA**

Python Scripts — *Jan 2020 - Mar 2020*

- Created Python scripts to assist researchers at the Ocean Recoveries Lab at UC Santa Barbara. These scripts are used with Metashape to automate the process of converting datasets of photos researchers have taken of coral into accurately scaled 3d models in order to quantifiably measure the growth or deterioration of coral reefs.

Gomoku AI — **Santa Barbara, CA**

Artificial Intelligence — *Jun 2020 - Jun 2020*

- Developed an AI in Python to play Gomoku. This AI uses the Minimax algorithm and a custom point evaluation system to determine the best move. It incorporates Alpha-Beta Pruning and an optimized method of searching in order to reduce computation time.

Fitness Equipment Scraper — **Oak Park, CA**

Web Application — *Jul 2020 - Jul 2020*

- Constructed a Python Flask web application hosted on Heroku that utilizes cron jobs to scrape equipment information with Beautiful Soup from popular fitness websites and store them in a Postgres database. Due to COVID-19, fitness equipment is hard to find, so this application displays all available fitness equipment in one place to save people time in their search.

Author Predictor — **Santa Barbara, CA**

Machine Learning — *May 2020 - May 2020*

- Designed a Machine learning Multinomial Naive Bayes Multi classification model with a bag-of-words text representation to predict the author of an anonymous article. Used lemmetization, bigrams, and trigrams as methods to improve accuracy.

LocNes — **Santa Barbara, CA**

Website — *Mar 2019 - Oct 2019*

- Designed and developed the website and ecommerce platform for a startup called LocNes. This website was written in HTML, CSS, and JavaScript and incorporates the Shopify API.

Walter Reed National Military Medical Center — **Bethesda, MD**

Hardware — *Jul 2018 - Aug 2018*

- After building my own custom 3D Printer I interned at Walter Reed's state-of-the-art 3D Printing facility designing and printing devices for medical applications.

First-Person-View Quadcopter — **Oak Park, CA**

Hardware & Firmware — *Oct 2018 - Dec 2018*

- Built a quadcopter that is controlled with a first-person-view real time video feed to better understand how all the hardware components such as the electronic speed controllers, PDB, radio and video receivers, brushless DC motors, and gyroscope interact with firmware placed on the flight controller.