Phillip Lai

805-616-1163 phillyp.lai@gmail.com phillplai.me github.com/pdlai linkedin.com/in/phillplai

PROJECTS

Fetchwell | *(React/Redux, Ruby on Rails, Node.js, postgreSQL, jQuery, AWS, HTML/CSS)* live | github

Fullstack clone of clothing brand Madewell's online shopping site. Mobile friendly.

- Implemented efficient state and props management strategies to minimize the number of queries and rerenders to increase performance and scalability
- Utilized the URL path to persist filter state upon page refresh to DRY up code and reduce the number of queries
- Employed RESTful API methodologies when routing backend routes and data

TheftDeflect | *(React/Redux, Express.js, Node.js, MongoDB, Google API, AWS, HTML/CSS)* live | github

Single-page web app that allows users to view and report hotspots of vehicle thefts and vandalism

- Employed Google Maps API to generate a heatmap of criminal hotspots and create markers of incident locations
- Optimized performance of EventListeners to significantly reduce load time and increase map responsiveness
- Implemented image uploading capabilities using AWS S3 allowing users to store and retrieve accident images

UAV Forge | *(C++, Qt Creator, Sockets, AWS SageMaker, OpenCV, Python, Tensorflow)* link | github

Competitive UAV Project Design Team

- Built a ground station capable of autonomous UAV control and obstacle avoidance for the annual AUVSI competition in a team of 25 members
- Wrote an image processing pipeline capable of identifying and classifying high confidence targets using optical character recognition, and localizing identified targets using geopositioning
- Utilized OpenCV for image processing algorithms and Amazon SageMaker to build and train the convolutional neural network used to identify letters and numbers

EXPERIENCE

Systems Engineer 1 | *(DOORs, Creo)*

Raytheon Technologies Mar 2020 - Dec 2021

- Analyzed electrical schematics and design specs to determine root cause of radar hardware failures
- Provided technical repair procedures and guidance for testing and redeployment of radar modules

Systems Engineering Intern | *(C++, C, Gitlab CI/CD, OpenCV, XML)*

General Atomics June 2018 - Sept 2018

- Developed imaging software for the Lynx Radar to significantly improve its capabilities in locating targets of interest
- Created continuous integration pipeline and unit tests to automate testing of system modules
- Integrated roadmap datasets and probability maps to increase the accuracy of successful classification
- Employed vector analysis strategies to approximate target trajectories and paths

AWARDS

Postmates Choice Award $1000 | *(Python, Tornado, Azure, Postmates API, HTML/CSS)* LA Hackathon 2016

- Our app, CrowdFoods, simplified payments for food services by allowing users to pay smaller, prorated amounts which won the category of Best Use of Postmates API

UCI Cyber CTF Grand Prize Winner | *(Cyber Security Competition)* Cyber@UCI Spring 2018

- Solved a series of security challenges which included steganography, web exploitations, network packet analysis, and cryptography to score points and compete against over 40 teams

EDUCATION

University of California, Irvine - *B.S. Electrical Engineering, 2015-2019*

AppAcademy - *16-week full stack web development course, Spring 2022*