Phillip Lai

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EXPERIENCE

Systems Engineer 1 | *(DOORs, Creo)*
Raytheon Technologies Mar 2020 - Dec 2021

- Provided technical repair procedures and guidance for radar hardware returning from field deployment

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

PROJECTS

Fetchwell | *(React/Redux, Ruby on Rails, jQuery, postgreSQL, Node.js, 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 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, MongoDB, Node.js, 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 high criminal activity hotspots and create markers of incident location and event details
- 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 images

UAV Forge | *(C++, Qt Creator, AWS SageMaker, OpenCV, 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 to identify letters and numbers

SKILLS

Languages | Javascript, Ruby, C++, C, Python, Java, Shell, SQL, HTML5, CSS, XML
Frameworks | React, Redux, Ruby on Rails, Express.js, Mongoose, jQuery, PyTorch
Tools | Gitlab CI/CD, AWS, IntelliJ, Visual Studio, Qt Creator, Android Studio, postgreSQL, MongoDB, Azure, Heroku

EDUCATION

University of California, Irvine - *B.S. Electrical Engineering, 2015-2019*
AppAcademy - *16-week full stack web development course, Spring 2022*