SEAN KAMANO

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EDUCATION

University of California San Diego September 2016 - June 2021
B.S. in Electrical Engineering (3.67/4.00),
M.S. in Intelligent Systems, Robotics, and Control *San Diego, CA*

WORK EXPERIENCE

Statistical Visual Computing Lab April 2019 - November 2020
Research Intern *University of California San Diego*

- Research and development of 3D shape reconstruction methods from single images using **deep learning**.
- Implemented experimental few-shot learning architectures with **PyTorch** and trained them on ShapeNet dataset.
- Set up few-shot learning datasets for team members to experiment on using **Bash** and **Python**.
- Wrote Dockerfiles to support numerous development environments for myself and teammates.
- Setup pipeline for collection of 343 3D scans of objects for new 3D shape dataset and researched use of Intel Drone to circle objects and upscale data collection using **ROS** (**C++, Python**) and **Gazebo** simulator.
- http://www.svcl.ucsd.edu/projects/OOWL

Enspirea, LLC June 2018 - September 2018
Software Engineering Intern *Evanston, IL*

- Development of Briode, a **LAMP stack** web app for HR services containerized with **Docker** (**CakePHP** MVC architecture) deployed with an **AWS EC2** instance.
- Implemented unit tests in **Python** using **Selenium** and **unittest** to automate user interaction with the UI.
- Improved **SQL** querying by creating indices, resulting in a runtime speedup by up to a factor of 50.
- Created a new UI with **React** for a console for administrator functions and setup basic CI with **Jenkins**
- Research and initial development of **RESTful API** for HR services

PROJECTS

PokerRL (in active development) May 2021 - Present

- Created a **Python** package with Texas Hold'em and a corresponding OpenAI gym environment for prototyping of reinforcement learning algorithms.
- Trained a policy network using a vanilla policy gradient to play Hold'em and serve as a computer player.
- Plan to use **Django** and **MySQL** and deploy to **AWS** to allow for play with AI trained in the environments described above.

Autonomous RC Car Communication September 2017-December 2017

- Extended DonkeyCar framework to support communication between two autonomous RC cars via **Python** sockets.
- Both cars were equipped with ultrasound sensors attached to an **Arduino** which was then connected to the **Raspberry Pi** which handled the control logic.
- https://guitar.ucsd.edu/maeece148/index.php/2018SpringTeam5

Smartfin January 2019 - April 2019
Contributor

- Created real-time visualizations of IMU data collected by a SmartFin using **MATLAB** and **Python**.
- Applied PCA to IMU + GPS data to select good features for classifying surfer behavior with MLP and SVM using sklearn: reached 85% accuracy for best-performing models
- Implemented a Kalman filter to track the pose of the surfboard.
- https://smartfin.org/

TECHNICAL SKILLS

Languages	Python, C/C++ (proficient); PHP (prior experience); SQL (limited experience)
Software and Tools	Git, Jira, Docker, AWS, Google Cloud, Django, React, Bash, MySQL, ROS