Grant Moe
Data Scientist and Robotics Enthusiast
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Education

Data Science Immersive, General Assembly, Remote; August 30, 2021 - November 23, 2021
12-week full-time immersive educational program strengthening Data Science skills including: Python, SQL, data cleaning, data visualization, regression models, classification models, web-scraping, APIs, NLP, advanced supervised learning, unsupervised learning, time series analysis, and statistics.

BA Psychology with Minor in Information & Computer Science, UC Irvine; June 2013

Projects

Neural-Net Autonomous Racer - Python | Numpy | Pandas | Tensorflow/Keras
My General Assembly Data Science Immersive capstone project. Implemented behavioral cloning with both pre-built and custom constructed/tuned neural networks, and utilized Numpy, Pandas, and Tensorflow/Keras Python libraries with Jupyter notebooks to automate data cleaning and model training. Moderately successful.

OpenAI/Donkey Gym Client - Python
Custom Python client to interact with OpenAI Gym Environment for Donkey Car. Produces image and telemetry data compatible with Donkey Car machine learning framework, OpenVSLAM, and neural-net autonomous racer capstone.

DIY Robocar - Python | Arduino/C++
Ongoing/neverending effort to build a custom autonomous RC car. Python and C++ code on an NVIDIA Jetson Nano linked to an Arduino-compatible microcontroller interfacing with a steering servo, electronic speed control, and various sensors. Uses custom Bluetooth Low Energy controller for manual driving.

Experience

Electronics Fabricator and Creative Technologist, Freelance
October 2018 - Present
Manufactured OpenPath (acquired by Motorola) keyless entry demo units. Worked as a contractor for VTProDesign on projects including Britney Spears - The Zone 30,000 sq ft installation in LA (featured in The New York Times, CNN, and Forbes).

Los Angeles Robotics Meetup, Founder and Organizer, CRASH Space, Culver City, CA
October 2018 - Present
Hosts monthly Meetup club for those interested in robotics, DIY robocars, autonomous technology

Software Developer - Volunteer, Cognitive Anteater Robotics Laboratory (CARL), UC Irvine
Summer 2013
Developed control and telemetry software for an autonomous Android robot. Created a custom C++ Robot Operating System (ROS) module linking Galaxy S3 robot brain to Ubuntu laptop over peer-to-peer UDP socket. Implemented RatSLAM, a biologically-inspired simultaneous localization and mapping algorithm based on rodent hippocampi.

Leadership

Board Member, CRASH Space (“Collaborative Research Association of Social Hacktivity”), Los Angeles
August 2020 - Present

Team Founder, RoboCup Rescue Robotics Team (RoboEaters), UC Irvine
2012 - 2013