Andrew Farabow

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Education

Virginia Tech (2019 - present)
Major: General Engineering (Computer Science)
Gonzaga College High School (2015 - 2019)
GPA 3.98

Skills

Programming: Python, Java, C/C++, Go
Frameworks: Numpy, PyTorch, OpenAI Gym, OpenCV, Pandas
Other Skills: deep neural networks, deep reinforcement learning, Git, LaTeX

Work Experience

Decipher Technology Studios Internship **Summer 2018 & 2019**

- Working on a small team to develop a new product which provides deep reinforcement learning-powered predictive auto-scaling for Decipher's Grey Matter service mesh
- Studying various deep reinforcement learning architectures, including Deep Q-Learning, Policy Gradient, Advantage Actor Critic, Proximal Policy Optimization (PPO) and Soft Actor Critic (SAC)
- Collaborated with another intern to implement PPO and write a microservice environment simulator
- Configured and deployed a demo of Sense to AWS under an imminent deadline
- Added Gated Recurrent Units to the network to better leverage time series data
- Tweaked hyperparameters and restructured PPO to improve performance

Activities

Gonzaga Dramatic Association Stage Crew **2017 - 2019**

- Led a 20-member team for two productions as stage manager (2018-2019)
- Designed and coordinated the construction of a structure over 20 ft. wide and 8 ft. tall
- Called cues during shows and solved problems in a high-pressure environment
- Maintained safe working conditions for the crew
- Worked with the stage manager to quickly diagnose and fix technical issues as assistant stage manager (2017-2018) before being promoted

HackBI (Bishop Ireton High School Hackathon)

- Member of a team that won best overall in a programming contest by writing an app that makes use of machine learning and computer vision techniques to interpret hand-written text
- Returned to HackBI in 2018 to mentor teams and teach deep learning concepts

Projects

Machine Learning Templates - flexible PyTorch implementations of a neural network, autoencoder and evolutionary algorithm designed for future machine learning projects
Grease Lights - custom Arduino-driven circuit and software to control LED strips located on the set of a high school production of Grease
Magic Mirror - remotely controlled Raspberry Pi-powered theatrical optical illusion