Chris Nalty

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Education

University of Maryland   Spring 2018 - Anticipated May 2021
Bachelor's in Computer Science with honors, with Mathematics minor   GPA 3.91

Relevant Coursework

Computer Science: Algorithms, Organization of Programming Languages, Machine Learning, Computer Vision, Intro to Data Science, Discrete Structures, Computer Systems, Intro to Aerospace Systems

Math: Calculus 1-3, Linear Algebra, Differential Equations, Statistics, Number Theory

Current Classes: Advanced Data Structures, Parallel Computing, Abstract Algebra, Program Analysis and Understanding (Graduate level program proofs)

Expected Spring Classes: Game Programming, Bioinformatic Algorithms and Databases, Complex Numbers, Principles of Modern Physics

Skills

Well Known: Python, PyTorch, Git, Docker, OpenCV, Unix, Java, C, C++

Used: Coq, OCaml, Ruby, Javascript, HTML/CSS, ARM assembly, MATLAB

Employment

Mukh Technologies - Software Engineering Intern   May 2019 - Present
- Data and algorithm visualization for facial recognition software
- Containerization of neural network pipeline in Docker
- PyTorch training and dataset scripts
- Updated front end API and reworked backend while maintaining expected functionality

Orbit Logic - Systems Engineering Intern   November 2018 - May 2019
- Regression testing
- Automation of test setup and running including database restoration using python

Projects

Multi-Task RL Algorithm Comparison on Atari | Present
- Implementations of A2C and PPO for multiple environment types
- Multi-task learning comparison of PPO and A2C on atari environments

Multi-Task DDQN on Atari | Spring 2020 | with Jill Granados, Michael Stephanus, Makai Freeman
- Implementation of Double Deep Q Network algorithm with PyTorch
- Training comparisons of four visual atari environments with 1, 2 or 4 tasks.

Genetic Algorithms for PyTorch | Fall 2019
- Training of fully connected networks using Genetic Algorithms
- Including rank order and roulette selection, weight level crossover and mutation

Character Recognition | Fall 2019
- Handwritten digit classification on MNIST and Kannada MNIST datasets using a convolutional neural network in Pytorch