Darren Huang

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EDUCATION

University of California, Berkeley **Major GPA: 3.94**

B.A. in Computer Science and B.A. in Applied Math *Expected Graduation: May 2020*

- Related Coursework: Efficient Algorithms, Data Structures, Robotics, Machine Learning, Intro to AI, Linear Algebra, Multivariable Calculus, Discrete Mathematics & Probability Theory, Machine Structures

EXPERIENCE

Institute for Human & Machine Cognition Robotics Lab - *Software Intern* *May 2018 - Aug 2018*

- Independently researched reinforcement learning, gathered experimental results, and presented them to the lab
- Implemented a novel method of augmenting continuous reinforcement learning exploration by selecting and navigating to areas of high potential reward using a neural network dynamics estimator combined with a model predictive controller
- Used the algorithm to augment Deep Deterministic Policy Gradient on the Mountain-Car-Continuous-v0 environment from OpenAI's Gym in python using mainly Tensorflow and NumPy
- github.com/darren-huang/SmartStartContinuous

Alarm.com - *Software Engineer Intern* *June 2017 - Aug 2017*

- Worked on the open ended problem of predicting server failures while ensuring that the code's setup, predictions, and visualizations could be easily interpreted by the team that would be using the software
- Detected real-time anomalies in timeseries data using Heterogeneous Ensembles of Standard Classification Algorithms to assist in analyzing and predicting server failures
- Created an interface for analyzing data seasonality and trends with unsupervised machine learning algorithms
- Analyzed 20,000+ metrics and made a web dashboard to display the 10 most problematic metrics/servers

PROJECTS

Cal Hacks 5.0 - n-Smarten *Fall 2018*

- Created an academic resource analyzer that uses NLP to build a concept map given a PDF
- Using term frequency–inverse document frequency combined with the appropriate context, given any section of the text the software found other sections containing prerequisite information

Cal Hacks 4.0 - WRLD API Prize Winner *Fall 2017*

- Utilized WRLD's 3D mapping API to visualize dynamic social environments with a team of 4 in under 36 hours
- Integrated WRLD's API with indoor routing, local visualization of social media content, and voice recognition through Google Cloud's API using Jade, CSS, and node.js

ORGANIZATIONS

Upsilon Pi Epsilon, Nu Chapter (CS Honors Society) *Jan 2018 - Present*

Computer Science Mentors @ Berkeley - *CS61B Senior Mentor* *Jan 2018 - Present*

- Prepare a group of 5 Junior Mentors weekly by discussing teaching tips and technical content
- Designed and presented mini-lectures to 4-5 students in Berkeley's Data Structures class each semester

Learning Bee Education Center - *Robotics Instructor* *Nov 2014 - Aug 2016*

- Developed various week-long and year-long programming, robotics, and electronics curriculum for kids between 1st and 7th grade, preparing them for the FIRST Lego League competition

SKILLS

- **Languages:** Python, Java, C, SQL, Scheme, MatLab, LaTeX
- **Tools/Libraries:** Tensorflow, OpenAI Gym, Gensim, Numpy, Git, Pytests, Pipenv, Gradle, Maven, IntelliJ, Linux
- **Machine Learning:** Deep Reinforcement Learning, Deep Learning, Regressions, Shapelet Transforms