OLIVER BRYNIARSKI

obryniarski@berkeley.edu obryniarski.github.io/ 661-808-7207
oliver-bryniarski obryniarski

EDUCATION

Stockdale High School 2014 to 2018

University of California, Berkeley (GPA: 3.79) 2018 to 2022
B.A. Computer Science and Mathematics (Double Major)

EMPLOYMENT

Berkeley Artificial Intelligence Research (BAIR) - Prof. John Canny
Undergraduate Researcher June 2020 to Current

Working in Professor John Canny's lab on new techniques for Unsupervised Representation Learning, with applications in both Natural Language Processing and Computer Vision. In particular, I work on contrastive learning methods in order to support a video-to-text translation pipeline. This research involves significant theory work (analysis, topology, and information theory) as well as programming in Python (PyTorch, NumPy).

PROJECTS

Sketch Completion Using Robust Classifiers 2020

Trained multiple adversarially robust convolutional neural networks. These models were then used for both image generation and sketch completion, achieving near SOTA results (inspired by Image Synthesis with a Single (Robust) Classifier, Santurkar et al.). Created website demo - https://bit.ly/2Zox4bs.

Random 2D World Generation 2019

Created an object-oriented dungeon crawler game involving random world generation, taking advantage of several data structures, such as weighted unions to assure each room was accessible. Also implemented realistic AI to chase the player around while fulfilling goals (Dijkstra's and A* algorithm).

AWARDS

1st place out of ~700 students in Berkeley CS189 Deep Learning Competition

Implemented Feed-Forward Neural Network with dropout and stochastic gradient descent from scratch in NumPy, winning a competition in Berkeley's undergrad machine learning course.

ACTIVITIES

Machine Learning @ Berkeley · Researcher Feb. 2020 to Current

- Research on satellite image super-resolution. Created technical presentation on Metropolis-Hastings Generative Adversarial Networks for image generation, including my own results. Working with novel GAN based architecture for sketch completion on Google Quickdraw dataset.
- Officer on Internal Committee: Teaching new members about foundational Machine Learning methods in order to get them ready to work on research and industry projects. This is done through an intense semester-long course.

Upsilon Pi Epsilon (UPE) Honor Society 2019 to Current

Top Third of CS Majors at UC Berkeley

SKILLS

LANGUAGES: Python, Java, SQL, MATLAB, HTML/CSS, C
FRAMEWORKS: PyTorch, TensorFlow (1/2), Keras, NumPy, Pandas

COURSEWORK

Current

CS61A - Structure and Interpretation of Computer Programs (A)
CS61B - Data Structures (A)
MATH 110 - Advanced Linear Algebra (A+)
CS170 - Algorithms (A-)
CS189 - Machine Learning (A)
EECS126 - Probability and Random Processes (A-)
EECS127 - Optimization (A)