Jerry Pan

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Education

Duke University | Durham, NC May 2019
B.S. in Computer Science GPA**:** 3.9 /4.0
Selected Coursework: Machine Learning; Computer Vision; Reinforcement Learning; Artificial Intelligence; Numerical Analysis; Applied Stochastic Processes; Cloud Computing

Experience

Incoming Facebook Software Engineer | Menlo Park, CA July 2019
Facebook Software Engineering Intern | Ads Ranking ML Modeling | Menlo Park, CA May 2018 – July 2018

- Developed new features that utilized TF-IDF to capture co-occurrence information resulting in non-trivial revenue gains.
- Implemented and experimented with several research ideas on ranking models, which involved writing custom Caffe2 operators in C++ and refactoring ranking model code in Python. Achieved meaningful training speed increase with same inferencing performance over baseline.

Cisco Software Engineering Intern | Software Integration & Orchestration | Cary, NC June 2017 – August 2017

- Developed a MEAN stack web application used to configure a tool for managing the status of Cisco network applications.

Duke CS Teaching Assistant | Computer Vision, Machine Learning, Discrete Math | Durham, NC September 2016 – May 2019

- Computer Vision (Spring 2019): Hosted office hours and graded assignments
- Machine Learning (Fall 2018): Led recitation, hosted office hours, and graded assignments.
- Discrete Math (Fall 2016): Hosted office hours, created assignment solutions, and graded assignments.

Research

Computational Biology Project | Professor Cynthia Rudin August 2018 – Current

- Developed a system to detect individual microwells from scans generated by a prototype microwell processing machine.
- Experimenting with CNN and convolutional filtering to screen false positives from images of latent HIV reservoirs in single cell assays.

Data Privacy Research | Professor Ashwin Machanavajjhala May 2017 – December 2018

- Experimented with using an autoencoder to obfuscate sensitive information while preserving useful information from sensor data through an adversarial training setting.
- Contributed to paper on protecting sensor privacy: petsymposium.org/2019/files/papers/issue1/popets-2019-0002.pdf

Duke Data+ | **Professor Alessandro Arlotto** May 2016 - July 2016

- Predicted wait times of rides at Disney parks using an autoregressive model fitting on wait time and categorical data.

Projects

Anime Recommender: An anime recommendation website that uses matrix factorization to learn latent features.
Chess Playing Robot: A robot that utilized a magnetic gantry system to move pieces and a CNN to detect board state.
Smart Recycler: A robot that sorted recyclables using object detection and Microsoft CV API. **HackDuke Microsoft API prize.**
Basketball Stat Visualizer: A web app that displayed Duke basketball players' stats in VR. **2nd in Duke Basketball Hackathon.**

Activities

Duke IEEE | Webmaster: October 2015 – May 2018
Duke League of Legends Club | President and Co-founder: April 2016 – May 2017

Skills

ML Development: Python (Tensorflow, Keras, Caffe2), MATLAB, R, SQL (Presto, Hive, MySQL)
Web Development: MEAN stack, HTML, CSS, PHP, JS
General Programming: Java (Android), C++, MIPS