Adel Setoodehnia

asetoodehnia@berkeley.edu | 908-416-0699 | LinkedIn: linkedin.com/in/adel-setoodehnia/
Website: asetoodehnia.github.io | Github: github.com/asetoodehnia

Education

University of California, Berkeley Berkeley, CA
Bachelor of Arts in Mathematics and Computer Science; GPA: 3.62/4.0 *Expected Fall 2020*

Relevant Coursework: Mathematical Logic · Complex Analysis · Real Analysis · Abstract Algebra · Numerical Analysis · Probability and Random Processes · Linear Algebra · Multivariable Calculus · Algorithms for Computational Biology · Image Manipulation, Computer Vision and Computational Photography · Deep Neural Networks · Operating Systems and Systems Programming · Machine Learning · Artificial Intelligence · Efficient Algorithms and Intractable Problems · Data Structures · Computer Architecture

Experience

University of California, Berkeley Berkeley, CA
Course Staff - CS61B: Data Structures *August 2018 - present*

- As part of the course staff, I helped with grading assignments, proctoring exams, hosting office hours, and teaching lab and discussion sections for students.

Kioxia America, Inc. San Jose, CA
DevOps Engineering Intern *June 2020 - August 2020*

- As part of the DevOps team, I worked on a SystemVerilog code generation pipeline for UVM Register Modeling. This project was mainly implemented in Python.

Goldman Sachs New York City, NY
Securities Strats Summer Analyst *May 2019 - August 2019*

- **Equities Synthetic Products Group Strats team**: I conducted research and analysis on Goldman's projected dividend data, identifying some key issues and proposing solutions to help remodel and update projection models Goldman Sachs uses for the data. The data was comprised of the dividends being paid out by all the underlyers of the Russell 3000 index, and I conducted my analysis and tested my models primarily in Python.
- **Ficcs Bolt Web Strats and Ficcs Repo Strats team**: I implemented a framework to automate quoting for Bond Future Invoice Spreads. I primarily worked in Slang, Goldman's proprietary programming language, and Java.

Intertrust Technologies Sunnyvale/San Francisco, CA
Data Scientist Intern *May 2018 - August 2018*

- I worked with the Data Science team to design and develop ML algorithms and models that utilized by Intertrust's Modulus Trusted Data Platform; namely LSTM RNNs for power prediction and anomaly detection of time series data provided by several wind farms.

Projects

Stool Image Recognition [Dieta]:

- I am currently working with Dieta (a personalized digestive health startup) to research, design, and train different models to give users personalized feedback on their stool's consistency and completeness.
- This aims to better aid those struggling with IBS throughout by providing them insight to their digestive health.

Battery [Life] Not Included: Using Attention Models to Predict Battery Life

- The aim was to tackle the problem of predicting how long a lithium-ion battery will last before it "dies" using deep learning techniques.
- The data used was associated with the paper "Data driven prediciton of battery cycle life before capacity degradation" by K.A. Severson, P.M. Attia, et al.

Pintos: Extended the educational operating system Pintos to implement...

- a priority scheduler and MLFQS for the threading system, various system calls, a buffer cache, support for extensible files, and support for subdirectories.

Image Captioning & Style Transfer:

- I implemented an image captioning system on MS-COCO using vanilla recurrent networks and using Long-Short Term Memory (LSTM) RNNs. Using SqueezeNet as a feature extractor, I also implemented the style transfer technique from "Image Style Transfer Using Convolutional Neural Networks" (Gatys et al., CVPR 2015)

PACMAN: Reinforcement Learning

- Incorporated Q-learning and Value Itertion to optimize the Pacman agent's actions for different environment MDPs
- I further optimized the agent by implementing an approximate Q-learning agent that learns weights for features of states, where many states might share the same features.

Skills

Languages: Python, Java, C, SQL, HTML/CSS, MATLAB, Scheme **Technologies**: Git, AWS, IntelliJ, Jupyter Notebooks, Jira, AutoCAD
Libraries: Keras, TensorFlow, PyTorch, Scikit-Learn, Numpy, Pandas, Matplotlib, Spark, OpenMP
Spoken Languages: English, Farsi (Persian)

Additional Experience & Achievements

Project Manager at **Medical Technology at Berkeley**