

# Adel Setoodehnia

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## EDUCATION

### University of California, Berkeley

Berkeley, CA

*Bachelor of Arts in Mathematics and Computer Science; GPA: 3.62/4.0*

*Class of 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

### Brex

Remote / New York City, NY

*Software Engineer*

*March 2021 - present*

- As a software engineer on the Spend Accounting Integrations team, I work on various projects relating to the different accounting services / ERPs that the Brex dashboard allows customers to integrate with.

### University of California, Berkeley

Berkeley, CA

*TA - CS61B: Data Structures*

*August 2018 - December 2020*

- As part of the course staff, I help with grading assignments, proctoring exams, hosting office hours, and teaching lab and discussion sections for students. I also help facilitate and maintain the infrastructure for grading systems as well as course management tools.

### 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 worked with Dieta (a personalized digestive health startup) to research, design, and train different models to give users personalized feedback on their stool's consistency so as 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 from "Data driven prediction of battery cycle life before capacity degradation" by K.A. Severson, P.M. Attia, et al.

### 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)

### FaceMorph:

- Using a set of point correspondences and the Delaunay triangulation algorithm, I generated a set of corresponding triangles on each image. Then through multiple affine transformations, I created a "morph" sequence that seamlessly transforms an image of my face into an image of my roommate's.

## SKILLS

**Languages:** Python, Java, C, SQL, HTML/CSS, MATLAB

**Technologies:** Git, AWS, Docker, Kubernetes, Spark, OpenMP, AutoCAD

**Data Science/ML:** Keras, TensorFlow, PyTorch, Scikit-Learn, Numpy, Pandas

**Spoken Languages:** English, Farsi (Persian)

## ADDITIONAL EXPERIENCE & ACHIEVEMENTS

Project Manager at **Medical Technology at Berkeley**