Scott Lee

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2716 Haste St. Apartment 5, Berkeley CA 94720

EDUCATION

University of California, Berkeley — Expected Graduation Date: **May 2016 B.S.**

Electrical Engineering and Computer Science and Statistics — **GPA: 3.3**

Regents' and Chancellors' Scholar — PG&E Bright Minds Scholar

COURSEWORK

Efficient Algorithms and Intractable Problems — *Data Structure and Algorithmic Analysis (Java)*

Machine Learning — *Operating Systems*

Internet: Architecture and Protocols(Networks) — *Artificial Intelligence*

Discrete Mathematics and Probability Theory — *Introduction to Microelectronic Circuits*

Structure and Interpretation of Computer Programs (Python) — *Machine Structures*

SKILLS

Languages: Python Java SQL C JavaScript/HTML/CSS Shell(Unix) PHP GIT

Software: Hadoop HDFS/Hive NumPy/Pandas/SciPy d3 bokeh

WORK EXPERIENCE

Apple (Applied Machine Learning – Data Science Intern)

- **Big Data Insight (Full Stack Project) –** Robust and dynamic tool to easily generate many different visualizations and perform analysis/anomaly detection on highly complex data.
  - Designed a front-end form interface using **HTML/CSS/JS**. Outputs **bokeh** graphs with relevant information.
  - Query highly complex and enormous distributed database with **SQL** to generate **aggregates**. Store data into **Hadoop HDFS**. Use **Hive and HiveQL** to generate hyper-aggregates.
  - Use **Pandas/NumPy/SciPy** to perform **LOWESS** regression and find confidence intervals for **anomaly detection**.
  - Perform **ridge regression, linear regression**, and cross validation to attempt time series predictions.

The Aerospace Corporation (Network Systems Software Intern) — 06/14 – 08/14

- **Interactive Network Visualization Tool & GUI –** Interface to a program that simulates a defense network with nodes and links. Used Traits package and subprocesses in python to create GUI. **D3/JavaScript/HTML/CSS** to create interactive force-directed graph to simulate network; used **PHP** as server for communication between GUI and graph, to allow deletion of nodes/links from graph and output in GUI.
- **Network Performance in Cloud Computing –** Used **OpenStack** and **AWS** to perform extensive testing with both UDP and TCP, as well as iPerf, LookBusy, and other tools to simulate different scenarios and draw conclusions.

PROJECTS http://github.com/scottlandg6

Music Transcription (Python, C) (Done at Calhacks in team of 4) — 10/14

- Read music from an audio file (WAV or MP3), produce frequencies using FFT (C and Python), and convert notes.
- Attempted rhythm recognition and transcribes music into PDF format using lilypond.

Trip Finder (Java) (A* Search & DFS/BFS) — 11/13

- A client that takes in locations and distances and places them into graph structure.
- Uses A* search to find the shortest path between inputted locations and prints out GPS-style directions. Implements breadth first traversal and depth first traversals.

Jumping Cubes with AI (Java) — 10/13 – 11/13

- Two-person board game with N x N squares. Client takes in commands (set number of spots, size of board, etc.) and can print current state of board.
- Create an AI using MinMax/Alpha-Beta Pruning that must be able to force wins.

Hadoop/MapReduce (Java) — 03/14

- Connect 4 game with AI (Minmax) Done with MapReduce framework from Hadoop.
- Ran on EC2 machine to analyze effectiveness of using more machines and efficiency of combiner.

ShowCam (Ruby on Rails) (Done at LA Hacks in a team of 4) — 04/14

- Project at LA Hacks with a group of 4. Uses webcam to sense motion, records video when motion is sensed and uploads to webapp.
- Mostly worked on the webapp framework, using Ruby on Rails for backend/database and HTML/CSS/JS for front.

INTERESTS/EXTRACURRICULARS

Stocks (4 years) – Learned to make valued judgments and read market trends. (150% increase in portfolio)

Hackers@Berkeley UCB Club/Team Badminton UCB League of Legends team Travelling/Exploring Writing