Nick Titterton

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Education

University of California, Berkeley	Fall 2015 - Spring 2019

Computer Science, GPA: 3.42

Coursework:

Theory: Algorithms, Approximation Algorithms (Grad), Beyond Worst Case Analysis (Grad), Lower Bounds (Grad)

AI/ML: Artificial Intelligence, Machine Learning, Deep Neural Networks

Misc Upper Division: Security, Networking, Databases, Probability and Random Processes, Computational Photography

Misc Lower Division: Intro, Data Structures, Architecture, Discrete Math and Probability, Electrical Engineering A and B

Experience

Software Engineering Intern, ServiceNow — Summer 2018
Updated AWS EC2/EBS API frameworks from Java to REST-ful Javascript on an Agile/Scrum team.

Class Coordinator, Computer Science Mentors — 5th Semester
Mentored Intro and Discrete Math/Probability students in a small group setting on class concepts. Collaborated with and managed 50+ fellow mentors to create teaching content and learn teaching methods.

Undergraduate Student Instructor: Algorithms, Intro to CS — Spring 2018, Fall 2018
Developed course slides, taught students in section, wrote questions for exams, graded exams, facilitated office hours and homework parties, and coordinated with other staff (held course staff positions before this too).

Project Member, Meta-Learning for Reinforcement Learning, Launchpad — Fall 2018
Developed and tested a Model-Agnostic Meta-Learner (MAML) for reinforcement learning tasks within OpenAI Gym on a small team within the Launchpad club.

Projects

Markov Chain Generator Reddit Bot
Wrote, tested, and deployed a reddit bot that scans a user's recent comments and generates a markov chain using Python Reddit API Wrapper (PRAW), AWS EC2, SQS, Lambda, and Cloudwatch.

SDP Max Cut Approximator
Wrote and tested a randomized 0.5-approximation, derandomized greedy 0.5-approximation, and semidefinite programming relaxation 0.879-approximation of the MAX CUT problem using cvxpy and numpy.

Low-Distortion Fakcharoenphol-Rao-Talwar Trees using ReactJS, Canvas, PyPlot
Implemented $O(n^2)$ low-distortion FRT trees, MSTs (Prim's/Kruskal's), and random trees using ReactJS and canvas. Also did distortion analysis using Google Colab and matplotlib.pyplot.

Skills

Languages
Proficient: Python (numpy, scipy, cvxpy, TensorFlow, scikit), Java (Maven), Javascript (React)
Familiar: SQL (mySQL, SQLite), HTML, CSS (Bootstrap), Objective-C, C, MIPS, Scheme

Tools
Terminal (bash), Git, emacs, LaTeX, AWS (EC2, S3, Route 53, Lambda, CloudWatch, SQS)