CAT NGO

github.com/catngo
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EDUCATION

Harvey Mudd College *Expected Graduation: May 2020*
Joint Computer Science and Mathematics (B.S.) *Major GPA: 3.80*
Relevant Coursework: Computer Insights, Data Structures and Program Development, Discrete Mathematics, Intermediate Lingear Algebra, Intermediate Probability, Independent Study: Intro to Statistical Learning, Logic and Computability, Abstract Algebra

EXPERIENCE

Computer Science Tutor/Grader – *Claremont, CA* August 2017 — Present
Computer Science Department

· Tutor students and grade assignments for Intro to Computer Science (Fall 2017), Computer Insight (Spring 2017) and Data Structures (Fall 2018)

Sports Data Analyst – *Claremont, CA* August 2017 — January 2018
Claremont-Mudd-Scripps Mens' Basketball

· Scraped play-by-play logs of games from 2016-2017 season of the Mens' Basketball Team
· Automated statistical analysis of the performance of five-player lineups in Python
· Applied analysis to generate practical team strategy recommendations and presented findings to Head Coach

Howard Hughes Medical Institute Research Intern – *Pasadena, CA* June 2017-August 2017
Prober Lab, Department of Biology and Biological Engineering, California Institute of Technology

· Measured relative expression of cytokines marker IL-1β, IL-6 and NF-κB in zebrafish using qPCR
· Computationally administered ANOVA tests to statistically guarantee differences between expression populations
· **Publication:** Maheras et al. (2018). *Genetic Pathways of Neuroregeneration in a Novel Mild Traumatic Brain Injury Model in Adult Zebrafish. eNeuro 2 January 2018*

PROJECTS

Chunky String Data Structure – *C++* April 2018 — May 2018

· Implemented generic Chunky List data structure that dynamically stores arbitrary data in a linked list of arrays
· Wrote constant-time insert and erase functions for the data structure

March Madness Modeling and Prediction – *Python* March 2017

· Scraped statistics from teams in the past 6 tournaments in NCAA D1 Tournament
· Applied genetic optimization to generate weight vectors predicting winner in head-to-head matchup with >60% accuracy

Salary Estimation – *Python* December 2016

· Trained a random forest classifier on the Census Income dataset to predict whether an individual will earn more than $50k/year with given qualifications
· Analyzed model to determine optimal way for job candidates to maximize earning potential

SKILLS

Programming Languages	Python, C++, Java, Racket, R, HTML/CSS
Software Libraries	Numpy, Pandas, Matplotlib, Scikit-Learn, BeautifulSoup
Utilities	LaTeX, Git, Markdown

EXTRACURRICULAR ACTIVITY & LEADERSHIP

Disciplinary Board Chair: Handle self-reports and lead bi-weekly Honor Board meeting May 2018 —Present
Honor Board Class of 2020 Representative January 2017 — May 2018