Frances K. McQuarrie
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Education

University of California, Berkeley 2016-Present
Bachelor of Arts in Statistics, minor in Computer Science
GPA: 3.77

Research Experience

Research Assistant, Data Science Discovery Program Fall 2018

- Assisted Sociology PhD student Krista Schnell.
- Deployed Python and the BeautifulSoup package within a Jupyter Notebook to scrape articles tagged with "Codingbootcamp" on Medium.com.
- Parsed each article's author name, author biography, article title, article text, publish date, url, and number of claps (a form of "kudos").
- Analyzed the number of different bootcamps mentioned in each article.
- Analyzed the distribution of number of claps compared to other articles on Medium.
- Attempted to predict the gender of the author based on their first name.
- Utilized the Seaborn visualization library to discern any differences in the publishing patterns between males and females.

Research Summer Intern, Adobe Systems Summer 2018

- Implemented a Ruby on Rails web app to easily access and submit machine learning jobs to Adobe Research's GPU cluster (deployed internally within Adobe).
    - The cluster was used to train and test new models that required heavy computing power.
- Developed Ruby scripts to automate the creation and submission of jobs to the HTCondor scheduler, which would launch Docker containers on the cluster machines, allowing users to create an ssh session and test models on high performance GPU's.
- Created Ruby scripts to automate adding, deleting, and updating users to the LDAP authentication system of the Research compute cluster.

Business Operations Intern, Tribe Dynamics Summer 2017

- Tribe Dynamics is a small startup that uses data science techniques to track social media "influencers" and advise companies on the new field of influencer marketing.
- Wrote and developed a Python program that returned any "home" location mentioned in an Instagram profile description.
- Curated a list of popular fitness "influencers" to further expand the company's tracked market segments.

Teaching Experience

Undergraduate Student Instructor (UGSI)

- STAT/CS/INFO C8: Foundations of Data Science Fall 2017-Present
    - This course, commonly referred to as Data8, teaches basic programming and statistical concepts to enable students with no prior technical experience to gain data analytical skills.
    - In Fall 2018, 1300 students from over 60 different majors enrolled in the course.
    - As a UGSI, my duties include:
        - Leading a two-hour lab session, which consists of a discussion worksheet and a jupyter notebook assignment.
        - Holding weekly office hours for students to ask questions and receive help.
        - Assisting the professors in developing assignments.
    - In Fall 2018, I joined the pedagogy team, where I and several other UGSI's reviewed the course's discussion and tutor worksheets to ensure that each question succinctly conveyed the necessary concepts.

Tutor

- STAT/CS/INFO C8: Foundations of Data Science Spring 2017
    - As a tutor, my duties included:
        - Leading two 45-minute small group tutoring sections per week, where I gave mini concept lectures and guided 4-5 students through that week's tutoring worksheet.
        - Holding weekly office hours for students to ask questions and receive help.
        - Grading student assignments.

Awards

2018 Outstanding Graduate Student Instructor Award Spring 2018

- Granted to graduate or undergraduate student instructors nominated and selected by the department for their exceptional teaching skills.

Skills

- **Proficient:** Python, R, pandas, LaTeX, SQL, numpy, Jupyter Notebooks
- **Familiar:** Ruby/Ruby on Rails, C, Java, RISC-V

Coursework

Upper division Statistics courses: STAT140, Probability for Data Science; STAT135, Concepts of Statistics; STAT133, Concepts in Computing; STAT151A, Linear Modeling: Theory and Applications (enrolled)

Other upper division courses: STAT/CS100, Principles & Techniques of Data Science; MATH110: Linear Algebra; ECON101A, Economic Theory-Micro; EECS127: Optimization Models in Engineering (enrolled)