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Jason Xu

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Education

Tufts University   *Expected May 2022*
- GPA: 3.90/4.00 (Dean's List)
- School of Arts and Sciences, Mathematics and Computer Science Majors

Shanghai American School   *July 2019*

Work Experience

Data Science Intern - Dormify   *June 2020 - August 2020*
- Used Google Analytics, Search Console, and Cloud Platform to measure impact of SEO changes, understand social media reach, and identify changes in customer behavior due to COVID-19.
- Designed a web scraper that collected competitor pricing data, automated process using Google Cloud Functions, and built out a dashboard (Flask and React.js) which aided in competitive pricing analysis as well as product design.
- Leveraged BigQuery, Scikit-Learn, and Pandas to engineer a Random Forest Classifier that identified likely repeat customers for promotional mailing segmentation. The model produced a segment with an 18 times higher revenue per send than the control.

Data Analytics Intern - Blueprint Education   *June 2019*
- Collaborated with Directors and Instructors to aggregate student mock exam data into a single database using Visual Basic.
- Created auto-updating score reports that displayed trends regarding location, gender, age, and number of mock exams.
- Reported score improvement findings that were included in weekly newsletters to prospective students and parents.

Part-Time Positions   *February 2020 - Present*
- **Teaching Assistant - Discrete Mathematics COMP61**
  - Course covers propositional logic, sets, counting, relations, proofs, modular arithmetic, RSA cyptography, and graph theory.
- **Grader - Art of Problem Solving**
  - Graded and provided extensive feedback on Python and Math homework submissions, responded to students' forum posts, and reviewed other graders' homework feedback before they were released back to students.

Projects

Spotify Genre Classifier   *June 2020*
- Trained a multimodal machine learning model to classify music genre using image, lyric, and audio data.
- Reduced 64x63x3 RGB representation of album covers to 652 features using randomized principal component analysis while preserving 95% of variance.
- Applied a fast Fourier transform on audio data and TF-IDF on lyrical data to vectorize samples before fitting both to a random forest classifier.

Brown Datathon - Wiki Atomic Edits - Creativity Award   *February 2020*
- Applied linear discriminant analysis on Wikipedia edits dataset in order to predict the insertion location of a phrase.
- Used Jupyter-Notebook, Scikit-Learn, NLTK for feature engineering, model creation, and model tuning during 22-hour long competition.

JumboCode - Just-A-Start YouthBuild   *August 2019 - May 2020*
- Developed the front-end of web application for Just-A-Start YouthBuild, a nonprofit organization aiming to educate those who have dropped out of traditional high school.
- Learned HTML, CSS, React.js, and Git to implement project designers' admin and user interface prototypes.

Freelance Coding - Proximity Hazard Detection - 3rd Place Finish   *June 2018*
- Used Python and OpenCV on dash cam footage from garbage trucks to assess hazard level by identifying truck direction, bin lifter movement, and pedestrian movement in a 20-day long, 142 participant online coding competition.

Skills

Languages	Python, C++, SQL/BigQuery, HTML, CSS, VBA, Java, JavaScript
Other	Pandas, BeautifulSoup, Scrapy, D3.js, Scikit-Learn, React.JS, Git, Flask
Coursework	Probability*, Real Analysis I*, Machine Structure and Assembly*, Algorithms*, Linear Algebra, Discrete
* - In Progress	Mathematics, Data Structures, Calculus III, Introduction to Computer Science