Justin Tse

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EXPERIENCE

Data Scientist
Button
New York City
June 2018 - Current

• Built and maintained a probabilistic classfication based recommendation system for a homepage banner that increased tap through rate by over 25% over the previous implementation.
• Handled the planning, setup, analysis, and automation of marketplace-wide experiments. Used learnings from these experiments to help determine the development roadmap and product prioritization for mobile product teams.
• Used airflow, SQL, Python, JavaScript, and Golang to build out end to end ETL pipelines that transformed raw unstructured data into our analytics warehouses. This data was used to train machine learning models, power autonomous alerts, inform internal dashboards, and to perform ad-hoc analysis.

Research Assistant
Professor Tom Alberts
University of Utah
May 2016 - May 2017

• Utilized novel probabilistic and geometric techniques to analyze the statistics of longest paths in last passage percolation, a model of cluster growth.
• Programmed simulations in SageMath and C# to explore the structure of extreme rays and their connection to path probabilities.
• The model under consideration has far-reaching applications to crystals, forest fires, cancerous tumors, sea ice formation, and viral social media.

EDUCATION

Columbia University
New York City

Masters of Arts Statistics, 3.75 GPA
Degree conferred December 2018

University of Utah
Salt Lake City

B.S. Honors Mathematics, Computer Science Minor 3.9 GPA
Degree conferred May 2017

PROJECTS

Twitter Based News Recommendation
Apr 2018 - May 2018

• Used the Twitter API to generate data indexed by news categories. Transformed the data via TFIDF and built a Suport Vector Machine model to classify the category of any given Tweet.
• Built a web application that took in a Twitter username, downloaded the user's Tweets, and categorized them with the model. The application produces a graph of the user's level of interest in each category and links relevant news articles from the New York Times API.

Bank Customer Behaviour
Jan 2018 - Apr 2018

• Used customer behavioural data to gauge customer satisfaction.
• Created a gradient tree boosting model to predict which products customers would buy in a given month.

SKILLS

Languages & Tools

Python (pandas, Airflow, numpy, skikit-learn, matplotlib), SQL, AWS
JavaScript, R, Golang, Prometheus, Grafana, Looker, Tableau