

# JULIA QIAO

## DATA SCIENTIST

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## Summary

Data Scientist experienced in using analytics to drive business impact across verticals, scaling new functions, working with high level stakeholders, and promoting data literacy.

## Skills

### PROGRAMMING

Python  
SQL  
HTML

### MACHINE LEARNING

Regression  
Classification  
Natural Language Processing  
Ensemble Methods  
Neural Networks

### LIBRARIES & FRAMEWORKS

Pandas  
Numpy  
Sklearn  
Beautiful Soup  
NLTK  
VADER  
Gensim  
Spacy

### DATABASES & CLOUD

AWS  
Postgres  
MySQL  
Teradata  
Hadoop  
Spark

### BUSINESS INTELLIGENCE

Tableau  
Google Analytics  
Adobe Omniture  
SAP Business Objects  
Qlickview  
Looker

## Experience

### METIS

Sept. 2020 - Dec. 2020

#### Data Scientist

Completed an intensive 12-week project-based data science bootcamp emphasizing Python programming, machine learning, and statistical modeling. Select projects include:

#### Noteworthy Usage: building product use cases via natural language processing

- Partnered with private e-notes startup to analyze product usage given limited user data (AWS).
- Engineered all features using text classification tools (VADER, Spacy, Emojis); created 5 clusters on note style via Kmeans clustering (Sklearn) and 8 topics on note content via topic modeling (Gensim).
- Extracted 5 core product use cases and strategy for repeat conversion via user-generated text.

#### What's New(s): a content based news subscription recommender app

- Scraped 200k article headlines from Twitter through Twitter API and Snscraper.
- Processed text using lemmatization, part-of-speech tagging, and language detection (NLTK, Spacy, Langdetect, Regex); topic modeled using Non-Negative Matrix factorization (Sklearn); recommender built using cosine similarity (Sklearn, Pandas, Numpy).
- Developed user-friendly web app using Streamlit (Python, CSS), which recommends news outlets for subscription, based on user interests across 9 preferences.

#### Millennial Home Owners: interpreting owner characteristics through classification

- Ingested longitudinal study data to Postgres database; cleaned using SQL.
- Tested Random Forest, XGboost, KNN using cross validation. Optimized final Logistic Regression model using feature engineering, class weight balance, and regularization (Sklearn, Pandas).
- Built Tableau dashboard for feature interpretation and data visualization.

#### The Blockbuster Abroad: predicting U.S. produced movie revenue in foreign markets

- Scraped 1200+ pages of data on domestic movie (Beautiful Soup, HTML) from 3 websites.
- Built linear regression model using feature engineering, polynomial transformation, and regularization to predict foreign revenue (Sklearn, Statsmodels, Numpy, Pandas, Matplotlib).

### EXPEDIA GROUP · New York, NY

Apr. 2018 - Sept. 2020

#### Analytics Manager (Mar 2019 - Sept 2020)

Promoted from *Analytics Specialist* (Apr 2018 - Mar 2019) to lead analytics projects across business lines for consumer campaigns and ad-hoc executive team initiatives.

Awarded Gold Star Performance Bonus in 2018: for top 5% of employees in Expedia Group globally.

- Extracted consumer travel trends through daily manipulation of large transaction datasets using SQL for 12+ brands (ie. Expedia, Orbitz, Hotwire); partnered with Marketing to build B2C and B2B campaigns; provided consumer insights for C-suite interviews.
- Launched new team to perform weekly analysis and formulate strategy on employee sentiment for executive team during COVID-19 pandemic, resulting in 10% increase in employee satisfaction.
- Built analytics roadmap for new company-wide intranet, partnered with Product and Engineering to reduce production timeline by 15%.
- Reduced team SQL processing time by 40% by streamlining weekly data queries.
- Hosted 20+ analytics workshops to promote data literacy for non-technical functions.
- Scaled new analytics function; created company-wide best practices as first employee in this role.
- Led 160+ analytics projects; received average stakeholder approval rating of 98%.

July 2016 - Apr. 2018

#### Market Associate

Awarded Market Associate of the Quarter for three consecutive quarters in top revenue market.

- Performed daily demand and pricing analysis to create custom strategies and optimize customer conversion for 400+ hotel clients (Four Seasons, Hilton, Hyatt, IHG, Marriott, etc.).
- Generated ~\$40k per week in revenue production through client strategy pitches.
- Overhauled weekly update process for entire team: reduced production time by 30%.

## Education

### NEW YORK UNIVERSITY

B.S. Economics 2016

B.S. Media, Culture, and Communication 2016