Joseph Leung

(480) 824-8112 | joeleung16@outlook.com | https://joeleung16.github.io/
https://www.linkedin.com/in/joseph-leung-623a9b132/

EDUCATION

Brigham Young University   Provo, UT
Bachelor of Science, Applied and Computational Mathematics (ACME)   June 2020
Bachelor of Science, Economics
Minor, Business Management

- GPA 3.95, ACT 33 (99th Percentile)
- GRE Verbal: 162, GRE Quant: 166, GRE Writing: 5.5
- Awards: Academic Full-Year Scholarship (2014, 2017,2018,2019) , MSS SOAR Scholarship (2014, 2017, 2018, 2019, 2020),

Honors Leadership Council Scholarship, (2019), Dean's List (2014, 2017, 2018, 2020)

- Relevant Coursework:

Algorithmic Design & Analysis	Probability Theory/Bayesian Analysis	Advanced Game Theory
Graph/Network Theory	Numerical Linear Algebra	Time-Series Regression Analysis
Optimal Control Theory	Continuous Optimization	Causal Statistics/Machine Learning

SKILLS

- **Python**: Data Visualization/Engineering, Web/Document Scraping, SciKitlearn, MongoDB, TensorFlow
- **SQL**: Advance Querying Techniques, using subqueries and nested subqueries in FROM, WHERE commands
- **Statistical Computing**: R, Stata, MATLAB – Data Visualization/Engineering, Regression Analysis, Parameter Estimation
- **Machine Learning**: Regression and Classification (OLS, Naive Bayes, ARMA/ARIMA, Decision Trees, SVM, Clustering)
- **Natural Language Processing**: Text Category Classification (LDA, TF-IDF), Sentiment Analysis

EXPERIENCE

Data Scientist   Salt Lake City, UT
Magpie Labs LLC   **January 2020 –Present**

- Utilized NLP Machine Learning methods to produce accurate newspaper articles given historical newspaper pages
- Constructed algorithmic tools to better identify spatial context when performing Layout Analysis, improving clustering results
- Optimized hyperparameters to be used in Transformer and Clustering models used to assist in Layout Analysis

Data Scientist   Salt Lake City, UT
Blerp Inc.   **September 2020 –Present**

- Deployed public dashboards displaying weekly internet trends scraped using Selenium from Google, YouTube, and TikTok
- Analyzed and scraped information from 1 Million+ Twitch users with Regex, inputting results into a MongoDB database

Research Professional   Chicago, IL
University of Chicago – Becker Friedman Institute   **July 2020 –November 2020**

- Analyzed the role of increasing health care jobs since 1980 using 10+ GB of Census and Medicare Data
- Built data scrapers to transform information from human-readable to machine-readable formats

Summer Analyst   New York, NY
Federal Reserve Bank of New York – Research and Statistics   **June 2019 – August 2019**

- Analyzed the policy implications of Opportunity Zones as established in the Tax Cut and Jobs Act of 2017
- Saved manager 300+ hours by engineering and analyzing 10+ GB of data unique to the Bank

Research Assistant   Provo, UT
Brigham Young University – Mathematics & Finance Department   **May 2018 – June 2020**

- Developed a versatile PDF data scraper obtaining 500,000+ bankruptcy filings from multiple State Judicial Courts
- Utilized SLURM commands on the local supercomputer to process and analyze 5+ TB of Real Estate Data
- Used Machine Learning methods to incorporate social data to predict the formation of Baseball Teams

RELEVANT PROJECTS

BYU Honors Thesis – Predicting Community Formation In Social Networks   **January 2019 –June 2020**

- Developed method to extract information from a social network, thereby creating a new metric which we call an "affinity score"
- Utilized Machine Learning methods to predict how communities form over time with 70%+ accuracy
- Presented findings to the Mathematical Association of America's Intermountain Section Conference in 2019

Genealogy Indexing Correction Guide   **November 2019 – March 2020**

- Developed network-based approach to identify and correct errors among 1,000,000+ surnames in the FamilySearch database
- Achieved 90% accuracy in identifying mistaken input which was versatile to multiple languages

SERVICE/LEADERSHIP

Executive Council Member   Provo, UT
Brigham Young University – STEM Alliance   **April 2019 – June 2020**

- Lead a coalition to organize STEM clubs across campus to enhance mentoring and networking services
- Collaborated with a newly established network of clubs to organize events with 100+ Freshmen attendees

Voluntary Representative & Executive Secretary   Lisbon, Portugal
The Church of Jesus Christ of Latter-Day Saints   **October 2014 – October 2016**

- Performed statistical analyses to improve training programs, tripling the organization's key indicators
- Instructed groups of 40+ volunteers in effectiveness trainings