

## Hannah B. Y. Lyon

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### Education:

#### M.S. Data Science

University of San Francisco | July 2019 - June 2020 | San Francisco, CA

- Scholarships: M.S. Data Science scholarship
- Certificate in Deep Learning through the Data Institute

#### B.S. Data Science

Concentration in Economics | New York University Shanghai | Sept. 2013 - Jan. 2019 | Shanghai, China

- Scholarships: Full tuition NYU Shanghai Undergraduate Scholarship
  - Activities: Two Term President, Founding Member, and Advisor of Service Club
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### Work Experience:

#### QVC- Associate Data Scientist

September 2020 - Present | West Chester, PA

#### Cuyana- Data Science Intern

October 2019 - June 2020 | San Francisco, CA

- Used 4th order Markov chains to develop a data driven marketing attribution model that informed marketing spend
- Created a customer propensity model using gradient boosting (xgboost) to determine critical site features that were then enhanced by the digital team to improve conversion
- Combined SQL and Tableau for ad hoc analysis of payment methods for digital marketing team
- Trained neural network in Pytorch to produce product embeddings which were used for a recommendation system on website product pages
- Modeled repeat purchaser behavior via neural network and predicted second purchases with a 97% accuracy rate which helped in customer retention

#### Webster Bank- Finance Intern (Enterprise Analytics)

March 2019 - June 2019 | Waterbury, Connecticut

- Pulled data from the Twitter API to create social media sentiment reports and benchmarking tools
- Developed predictive model for customer attrition using logistic regression in Python packages scikit learn and stats models
- Lead Python capability testing for integration into company tech stack

#### NYU Shanghai- Data Science Intern

September 2018 - December 2018 | Shanghai, China

- Performed network analysis of bus routes in Brooklyn, New York to recommend changes to optimize routes
  - Data visualization and exploratory data analysis of General Transit Feed Specification data in Python
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### Academic Projects:

- Implemented object oriented random forest regressor and classifier from scratch in Python
  - COVID-19 question and answer chatbot for Correlation One Data Science for All Women's Summit 2020
  - Scraped data from Twitch API and used own implementation of K-means and spectral clustering algorithms to perform clustering analysis to differentiate between Partner, Affiliate, and other user groups
  - Used Kaggle Telco data to predict customer churn with 85% accuracy
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### Technical Skills:

- Selected Coursework: Econometrics, Databases, Machine Learning, Linear Algebra, Data Visualization, Statistics, Data Structures, Distributed Computing (Spark), Time Series, Algorithms, A/B Testing, Deep Learning, Product Analytics, Amazon Web Services (AWS)
- Programming Languages: Python (numpy, pandas, matplotlib, keras, Pytorch, xgboost, Pyspark), SQL, R (ggplot2), HTML, CSS, Javascript (d3.js), git
- Machine Learning: Regression, SVMs, Random Forests, Decision Trees, PCA, Gradient Boosting, Neural Networks, Deep Learning