

ROY N. WU

M.S.E. IN COMPUTER AND INFORMATION SCIENCE & DATA SCIENCE

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EDUCATION

Philadelphia, PA Expected May 2022 Expected May 2022	University of Pennsylvania <i>Master of Science in Engineering, Computer and Information Science</i> <i>Master of Science in Engineering, Data Science</i> <ul style="list-style-type: none">• Courses: Algorithms & Computation, Big Data Analytics, Machine Learning, Deep Learning, Artificial Intelligence, Computer Vision, Machine Perception, Time Series Forecasting, Software Foundations• Leadership: Data Science General Assembly, Penn Data Science Group Board
New York, NY Aug 2013 - May 2017 Aug 2013 - May 2017	New York University <i>Bachelor of Arts, Mathematics</i> <i>Bachelor of Arts, Economics</i> <ul style="list-style-type: none">• Courses: Linear Algebra, Probability, Statistics, Econometrics, Differential Equations, Numerical Analysis• Honors and Awards: Dean's List, University Honors Scholar (Founders' Day Award)

SKILLS

Programming	Python (PyTorch · Scikit-Learn · NumPy · Pandas · Matplotlib · NetworkX) · C++/C · Scala · Java · R
Technologies	SQL · Apache Spark · AWS · Azure Databricks · Git · Docker · Power BI · L ^A T _E X
Others	Actuarial Exams: SOA Exam P/CAS Exam 1 · Languages: Mandarin Chinese · Video: Final Cut Pro, HitFilm

EXPERIENCE

Chicago, IL Jan 2021 - Present	William Blair & Co. <i>Data Science Intern</i> <ul style="list-style-type: none">• Building network graphs and text mining models in Python to analyze investment banking M&A deal paths
Boulder, CO Jun 2020 - Aug 2020	The Trade Desk, Inc. <i>Data Science Intern</i> <ul style="list-style-type: none">• Developed a new lookalike modeling feature with Spark and Scala; this long-awaited function allowed users to customize inputs to the ad campaign optimization algorithm• Analyzed 10⁸+ rows of unexplored ad group data in Vertica SQL and prototyped a custom multi-target linear regression model to support recommender system with Python; this began as an ambiguous project that I drove to completion and launched company-wide, resulting in 74% increase in ad group performance
New York, NY Jun 2018 - Jul 2019 Jun 2017 - May 2018	Vitech Systems Group, Inc. <i>Solutions Analyst</i> <i>Associate Solutions Analyst</i> <ul style="list-style-type: none">• Collaborated with tech leads to design extensive workflow processes and write new software design documents, advanced functional specifications, and enhancement contracts• Taught myself PL/SQL and worked with engineers to write and maintain SQL scripts for extracting reoccurring test cases, cutting down regression testing time by 25%
New York, NY Sep 2016 - May 2017	Haver Analytics, Inc. <i>Economic Research Intern</i> <ul style="list-style-type: none">• Compiled, managed, and quality-assured databases covering macroeconomic indicators of Asia-Pacific markets and delivered data upon each release to clients with DOS• Added new time-series data to databases and automated data extraction and formatting with DOS

PROJECTS

Independent Work Dec 2020 - Present	Robinhood Algorithmic Trading Bot <ul style="list-style-type: none">• Built a stock trading bot that interfaces with Robinhood's API to automate buying/selling shares based on historical stock prices and trend indicators
UPenn CIS 522 Jan 2020 - May 2020	Generating News Headlines Using Deep Learning Abstractive Summarization [paper] [code] [blog] <ul style="list-style-type: none">• Trained a Seq2Seq network with BiLSTM units on 200,000 news articles to generate summary headlines• Improved the network with attention mechanism, teacher forcing, and a pointer-generator; achieved BLEU score of 0.075, outperforming results from main reference paper from 2015 by 0.065
UPenn CIS 519 Jan 2020 - May 2020	Artificial Anime Character Design Using Generative Adversarial Networks [paper] [code] [blog] <ul style="list-style-type: none">• Implemented generative adversarial networks with improved training techniques (trained on 21,000 images) to generate artificial anime character designs