

ROY N. WU

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

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EDUCATION

Philadelphia, PA Expected May 2022 Expected May 2022	University of Pennsylvania <i>Master of Science in Engineering, Data Science</i> <i>Master of Science in Engineering, Computer and Information Science</i> <ul style="list-style-type: none">• Courses: Algorithms & Computation, Big Data Analytics, Machine Learning, Deep Learning, Artificial Intelligence, Computer Vision & Computational Photography• 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 · Scala · Java · SQL
Technologies	PyTorch · Scikit-Learn · NumPy · Pandas · Matplotlib · Apache Spark · AWS · Git · \LaTeX
Others	Actuarial Exams: SOA Exam P/CAS Exam 1 · Languages: Chinese (Mandarin) · Video: Final Cut Pro, HitFilm

EXPERIENCE

Chicago, IL Jan 2021 - May 2021	William Blair <i>Data Science Intern</i> <ul style="list-style-type: none">• Working on machine learning projects aimed to increase ROI in the private wealth management division
Boulder, CO Jun 2020 - Aug 2020	The Trade Desk <i>Data Science Intern</i> <ul style="list-style-type: none">• Added a new feature to support lookalike modeling for customized campaign optimization with Spark Scala• Designed a custom multi-target linear regression model and trained on 100,000 rows of ad group data (queried with Vertica SQL) to improve AI recommendation with Python; increased ad group performance by 45% and reduced error by 58% on average across all KPI goals
New York, NY Jun 2018 - Jul 2019 Jun 2017 - May 2018	Vitech Systems Group <i>Solutions Analyst</i> <i>Associate Solutions Analyst</i> <ul style="list-style-type: none">• Served as main liaison between engineering team and clients on agile-based software development projects• Built and maintained PL/SQL scripts for data extraction and data analysis• Collaborated with tech leads to design extensive workflow processes and write new software design documents, advanced functional specifications, and enhancement contracts
New York, NY Sep 2016 - May 2017	Haver Analytics <i>Economic Research Intern</i> <ul style="list-style-type: none">• Compiled, managed, and quality-assured databases covering macroeconomic indicators of APAC markets• Added new time-series data to databases and automated data extraction and formatting with DOS

PROJECTS

Independent Work Nov 2020 - Present	Automated Stock Trading Using Deep Reinforcement Learning <ul style="list-style-type: none">• Trained a Deep Q-Learning model to automate stock trading using n-day windows of closing prices• Currently using the trained model to prototype a stock trading bot that interfaces with the Robinhood app
UPenn CIS 522 Jan 2020 - May 2020	Headline Writer: Abstractive Text Summarization with Attention and Pointer-Generator Network [paper] [code] [blog] [youtube] <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: An Application of Generative Adversarial Networks (GANs) [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