

ROY N. WU

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

<https://roynwu.github.io>

+1 (973) 901-1028

wuroy@seas.upenn.edu

[linkedin.com/in/roynwu](https://www.linkedin.com/in/roynwu)

github.com/roynwu

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
Technologies	SQL · Apache Spark · AWS · Azure Databricks · Git · Docker · Power BI · \LaTeX
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 <i>Data Science Intern</i> <ul style="list-style-type: none">• Building network graphs and text mining models to effectively analyze investment banking M&A deal paths
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• Analyzed 100,000 rows of unexplored ad group data (queried with Vertica SQL) and designed a custom multi-target linear regression model 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 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	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