ROY N. WU

M.S.E. IN DATA SCIENCE @ UNIVERSITY OF PENNSYLVANIA

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EDUCATION

Philadelphia, PA *Expected May 2021*	**University of Pennsylvania** *Master of Science in Engineering in Data Science, Concentration in Computer Vision* · Courses: Algorithms, Big Data, Machine Learning, Deep Learning, Artificial Intelligence, Computer Vision · Leadership: Data Science General Assembly, Penn Data Science Group Board
New York, NY *Aug 2013 - May 2017* *Aug 2013 - May 2017*	**New York University** *Bachelor of Arts in Mathematics* *Bachelor of Arts in Economics* · Courses: Linear Algebra, Probability, Statistics, Differential Equations, Numerical Analysis, Econometrics · 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

Boulder, CO *Jun 2020 - Aug 2020*	**The Trade Desk** *Data Science Intern - Performance Automation Team* · 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** *Solutions Analyst* *Associate Solutions Analyst* · Served as main liaison between engineering team and clients on agile-based software development projects · Managed server and client databases for performing data analysis and resolving data issues with SQL · Collaborated with tech leads to design extensive workflow processes and write new software design documents, advanced functional specifications, and enhancement contracts · Delivered optimal software solutions via in-depth quality assurance of modifications and defect fixes
New York, NY *Sep 2016 - May 2017*	**Haver Analytics** *Economic Research Intern* · 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 server and client databases and automated data extraction/formatting
New York, NY *Oct 2014 - Feb 2015*	**PrimeAlpha** *Project Manager Intern* · Managed various projects, such as conducting investor due diligence and developing marketing campaigns · Oversaw and performed detailed software functionality, usability, and interface testing activities

PROJECTS

Academic Research *Jan 2020 - May 2020*	**Headline Writer: Abstractive Text Summarization with Attention and Pointer-Generator Network** [paper] [code] [blog] [youtube] · 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
Academic Research *Jan 2020 - May 2020*	**Artificial Anime Character Design: An Application of Generative Adversarial Networks (GANs)** [paper] [code] [blog] · Implemented generative adversarial networks with improved training techniques (trained on 21,000 images) to generate artificial anime character designs · Achieved FID scores of 64.45 and 44.70 for DCGAN and StyleGAN implementations respectively