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, Computer Vision, Artificial Intelligence · Leadership: Data Science General Assembly, Penn Data Science Group Board (Partnership Team)
New York, NY *Aug 2013 - May 2017*	**New York University** Bachelor of Arts in Mathematics and Economics · Honors: Dean's List, University Honors Scholar (Founders' Day Award)

Experience

Boulder, CO *Jun 2020 - Aug 2020*	**The Trade Desk** Data Science Intern - Performance Automation Team · Worked with engineers to productionize and scale advertising campaign optimization algorithms · Developed a new algorithm that supports lookalike modeling for a custom optimization feature that allows users to include multiple conversion pixels [Spark-Scala] [SQL] [AWS (EMR, S3)] · Owned the design and implementation of a new predictive model for the AI recommendation tool; increased ad group performance by 45% and reduced error by 58% on average across all KPI goals [Python] [SQL]
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 [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 · Mentored new hires and led training seminars covering domain knowledge and best industry practices
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 [DOS] · Performed statistical analysis on time series data to provide insights into historical market trends · Added new time series data to server and client databases and automated data extraction/formatting

Projects (more > https://github.com/roynwu)

Academic Project *Jan 2020 - May 2020*	**Headline Writer: Abstractive Text Summarization with Attention and Pointer-Generator Network** Henglin Wu, Ruilin Zhao, **Roy Wu**, Chenyuan Li [paper] [code] [blog] [youtube] · Developed an advanced Seq2Seq model that automates generation of news article summary headlines · Achieved BLEU score of 0.075, outperforming main reference paper from 2015 by 0.065
Academic Project *Jan 2020 - May 2020*	**Artificial Anime Character Design: An Application of Generative Adversarial Networks (GANs)** **Roy Wu**, Riley Xu, Tianhao Lu [paper] [code] [blog] · Built various GANs with improved training techniques to create artificial face designs of anime characters · Achieved FID scores of 64.45 and 44.70 for DCGAN and StyleGAN implementations respectively

Skills

Programming	Python · SQL · Scala · Java
ML/DL Libraries	PyTorch · Scikit-Learn · NumPy · Pandas · Matplotlib
Technologies	Apache Spark · AWS · Git · LaTeX
Others	Actuarial Exams: SOA Exam P/CAS Exam 1 · Languages: Chinese · Video: Final Cut Pro, HitFilm