

ROY N. WU

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

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EDUCATION

Philadelphia, PA <i>Expected May 2021</i>	University of Pennsylvania <i>Master of Science in Engineering in Data Science, Concentration in Computer Vision</i> <ul style="list-style-type: none">• 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 <i>Aug 2013 - May 2017</i> <i>Aug 2013 - May 2017</i>	New York University <i>Bachelor of Arts in Mathematics</i> <i>Bachelor of Arts in Economics</i> <ul style="list-style-type: none">• Courses: Linear Algebra, Probability, Statistics, Differential Equations, Numerical Analysis, Econometrics• Honors: Dean's List, University Honors Scholar (Founders' Day Award)

EXPERIENCE

Boulder, CO <i>Jun 2020 - Aug 2020</i>	The Trade Desk <i>Data Science Intern - Performance Automation Team</i> <ul style="list-style-type: none">• Worked with engineers to productionalize and scale advertising campaign optimization algorithms• Developed an algorithm that supports lookalike modeling for the custom optimization feature that allows users to include multiple conversion pixels with Spark and Scala• Prototyped a new predictive model for the AI recommendation tool with Python; increased ad group performance by 45% and reduced error by 58% on average across all KPI goals
New York, NY <i>Jun 2018 - Jul 2019</i> <i>Jun 2017 - May 2018</i>	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• 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 <i>Sep 2016 - May 2017</i>	Haver Analytics <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• 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

Academic Research <i>Jan 2020 - May 2020</i>	Headline Writer: Abstractive Text Summarization with Attention and Pointer-Generator Network <i>Henglin Wu, Ruilin Zhao, Roy Wu, Chenyuan Li</i> [paper] [code] [blog] [youtube] <ul style="list-style-type: none">• Developed an advanced Seq2Seq model that automates generation of news article headlines with PyTorch• Achieved BLEU score of 0.075, outperforming results from main reference paper from 2015 by 0.065
Academic Research <i>Jan 2020 - May 2020</i>	Artificial Anime Character Design: An Application of Generative Adversarial Networks (GANs) <i>Roy Wu, Riley Xu, Tianhao Lu</i> [paper] [code] [blog] <ul style="list-style-type: none">• Built GANs with improved training techniques that generates artificial anime characters with PyTorch• 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