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
- Built and maintained complex 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
- 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