

# Roy N. Wu

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

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## EDUCATION

Philadelphia, PA <i>Expected May 2021</i>	<b>University of Pennsylvania</b> MASTER OF SCIENCE IN ENGINEERING IN DATA SCIENCE, CONCENTRATION IN COMPUTER VISION <ul style="list-style-type: none"><li>• Courses: Algorithms, Big Data, Machine Learning, Deep Learning, Computer Vision, Artificial Intelligence</li><li>• Leadership: Data Science General Assembly, Penn Data Science Group Board (Partnership Team)</li></ul>
New York, NY <i>Aug 2013 - May 2017</i>	<b>New York University</b> BACHELOR OF ARTS IN MATHEMATICS AND ECONOMICS <ul style="list-style-type: none"><li>• Honors: Dean's List, University Honors Scholar (Founders' Day Award)</li></ul>

## EXPERIENCE

Boulder, CO <i>Jun 2020 - Aug 2020</i>	<b>The Trade Desk</b> DATA SCIENCE INTERN - PERFORMANCE AUTOMATION TEAM <ul style="list-style-type: none"><li>• Worked with engineers to productionalize and scale advertising campaign optimization algorithms</li><li>• Developed a new algorithm that supports lookalike modeling for a custom optimization feature that allows users to include multiple conversion pixels [<a href="#">Spark-Scala</a>] [<a href="#">SQL</a>] [<a href="#">AWS (EMR, S3)</a>]</li><li>• 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 [<a href="#">Python</a>] [<a href="#">SQL</a>]</li></ul>
New York, NY <i>Jun 2018 - Jul 2019</i> <i>Jun 2017 - May 2018</i>	<b>Vitech Systems Group</b> SOLUTIONS ANALYST ASSOCIATE SOLUTIONS ANALYST <ul style="list-style-type: none"><li>• Served as main liaison between engineering team and clients on agile-based software development projects</li><li>• Managed server and client databases for performing data analysis and resolving data issues [<a href="#">SQL</a>]</li><li>• Collaborated with tech leads to design extensive workflow processes and write new software design documents, advanced functional specifications, and enhancement contracts</li><li>• Delivered optimal software solutions via in-depth quality assurance of modifications and defect fixes</li><li>• Mentored new hires and led training seminars covering domain knowledge and best industry practices</li></ul>
New York, NY <i>Sep 2016 - May 2017</i>	<b>Haver Analytics</b> ECONOMIC RESEARCH INTERN <ul style="list-style-type: none"><li>• Compiled, managed, and quality-assured databases covering macroeconomic indicators of Asia-Pacific markets and delivered data upon each release to clients [<a href="#">DOS</a>]</li><li>• Performed statistical analysis on time-series data to provide insights into historical market trends</li><li>• Added new time-series data to server and client databases and automated data extraction/formatting</li></ul>

## PROJECTS (MORE > <https://github.com/roynwu>)

Academic Research <i>Jan 2020 - May 2020</i>	<b>Headline Writer: Abstractive Text Summarization with Attention and Pointer-Generator Network</b> HENGLIN WU, RUILIN ZHAO, <b>Roy Wu</b> , CHENYUAN LI [ <a href="#">paper</a> ] [ <a href="#">code</a> ] [ <a href="#">blog</a> ] [ <a href="#">youtube</a> ] <ul style="list-style-type: none"><li>• Developed an advanced Seq2Seq model that automates generation of news article summary headlines</li><li>• Achieved BLEU score of 0.075, outperforming results from main reference paper from 2015 by 0.065</li></ul>
Academic Research <i>Jan 2020 - May 2020</i>	<b>Artificial Anime Character Design: An Application of Generative Adversarial Networks (GANs)</b> <b>Roy Wu</b> , RILEY XU, TIANHAO LU [ <a href="#">paper</a> ] [ <a href="#">code</a> ] [ <a href="#">blog</a> ] <ul style="list-style-type: none"><li>• Built various GANs with improved training techniques to create artificial face designs of anime characters</li><li>• Achieved FID scores of 64.45 and 44.70 for DCGAN and StyleGAN implementations respectively</li></ul>

## SKILLS

<b>Programming</b>	Python · SQL · Scala · Java
<b>ML/DL Libraries</b>	PyTorch · Scikit-Learn · NumPy · Pandas · Matplotlib
<b>Technologies</b>	Apache Spark · AWS · Git · L <sup>A</sup> T <sub>E</sub> X
<b>Others</b>	Actuarial Exams: SOA Exam P/CAS Exam 1 · Languages: Chinese · Video: Final Cut Pro, HitFilm