Liu Jason Tan

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Experience

Morgan Stanley *New York, NY*
Analyst, Operational Risk Analytics *2022 – Present*

- **Collaborated** seamlessly with global cross-functional teams/stakeholders to **solve problems**, find trends, perform **root-cause analysis** and deliver **data-driven solutions** to mitigate challenges
- Developed **end-to-end models**, spanning from conceptualization to production utilizing **R** and **Python** to automate manual processes, resulting in a workload reduction of over 50%
- Applied **statistical techniques** (**regression** and **simulations**) to analyze **large multi-dimensional** data and generate **actionable insights** that propel business decisions
- Leveraged **natural language processing** techniques to perform thorough quality assurance on operation risk incident descriptions, ensuring accurate tagging and **classification**

Education

Master of Applied Data Science GPA: **4.00** /4.00
University of Michigan – Ann Arbor *Ann Arbor, Michigan*
Bachelor of Science in Information Systems GPA: **3.64** /4.00
Stony Brook University *Stony Brook, New York*

Skills

- Experienced in Excel, **R**, **SQL**, and **Python** (with expertise in libraries such as **Numpy**, **Pandas**, **Keras**, TensorFlow, SciKit Learn, and **NLTK**)
- Demonstrated proficiency in supervised and unsupervised **machine learning algorithms** such as **deep neural networks**, **classification**, **clustering**, **tree-ensembles,** and **regression**
- Extensive experience running millions of **Monte Carlo simulations** and thousands of **regressions** for in-depth analysis, anomaly detection, classification, and **predictive modeling**,
- Applied **Natural Language Processing** (NLP) methods such as **Word2Vec**, Part-Of-Speech Tagging, LSTM**,** and **BERT** for sentiment analysis
- Utilized both **quantitative** methods and **business insights** to generate results and improve risk management processes by **translating business needs into analytical frameworks**

Data Science Projects

Social Monitoring Dashboard

- Developed an **interactive dashboard** enabling users and companies to proactively monitor tweets for **reputation management** by leveraging the Twitter **API** to collect and analyze data.
- Implemented a **sentiment analysis** module utilizing a pre-trained **BERT** to accurately determine the sentiment of tweets, contributing to more **informed decision-making**.
- Employed **Non-Negative Matrix Factorization** to group tweets into distinct **clusters** based on their topics to allow for efficient content organization and **trend analysis**.