

# QUAN XUE Data Scientist II at GovTech

@ quan.xue@outlook.com

+65 9673 6560

in linkedin.com/in/quan-xue/

github.com/quan-xue

## EDUCATION

Georgia Institute of Technology

**M.S. Analytics**

08/2018 - 12/2019

- GPA 3.8/4.0
- Coursework: Algorithms, Data Mining, Deep Learning, Machine Learning, Optimization, Time-series Analysis.

London School of Economics

**BSc. Economics**

09/2015 - 06/2018

- First class honors with top 5% average score.
- Won all expenses paid scholarship to Washington D.C. to present final year economics thesis.
- Coursework: Advanced Econometrics, Behavioral Economics, Finance, Macro and Micro Economics.

## TECHNICAL SKILLS

Certifications

AWS Data Analytics Specialty

AWS Solutions Architect Associate

Azure Fundamentals

Technology

Airflow

AWS

Kubernetes

neo4j

Spark

Programming

R

Python

Scala

SQL

## AWARDS

**GovTech Teams Champion**

- Recognized with SG\$500 for evangelizing the use of Microsoft Teams in division

**Master Data Science Competition**

- Identified key growth areas and drafted business plan for major auto parts company using clustering techniques.
- Runner-up out of 30 teams with US\$5K cash prize.

**Collegiate Cup Hackathon**

- Conceptualized state-wide strategy to improve technology access for under-served communities.
- Georgia State Champion in case category winning US\$750 cash prize (2019).

**National Infocomm Scholarship**

- All expenses paid scholarship covering undergraduate and graduate studies valued at SG\$600K

## EXPERIENCE

Government Technology Agency (GovTech)

**Data Scientist/Engineer II, Tech Associate Programme**

Dec 2020 - Present

Singapore

**Grant fraud detection analytics platform**

- Designed and implemented Airflow and Spark ETL pipeline on AWS processing **100+ GB** of business and personal data monthly to generate **20+ M** nodes and relationships
- Designed and implemented API endpoints and visualization dashboard powered by neo4j graph database
- Recorded **20+ K** API calls monthly via **5+** government grant systems, preventing **SG\$X MM** fraud annually

**People-movement visualization and analytics platform**

- Designed and implemented Airflow and Spark ETL pipeline on AWS processing **600+ GB** of location data daily using Airflow and Spark
- Developed algorithm for generating map layer overlays based on user requirements and data constraints
- Led engagement projects with other government agencies exploring urban planning and COVID management
- Initiated and led improvements in data quality, using Grafana dashboard for identifying and troubleshooting data quality

**Passport photo adjustment application**

- Runner-up in company hackathon applying deep learning for background removal and photo straightening to expedite citizens' passport applications

Bridgewater Associates

**Investment Engineer**

Feb 2020 - Sep 2020

Westport, CT

- Conceptualized and implemented tool to detect data dependencies within investment systems, achieving **>50%** time saving.
- Designed data reliability and timeliness tests to ensure investment signal accuracy.
- Applied time-series analysis for predicting gold demand

Chick-fil-A

**Graduate Innovation Intern**

Fall 2019

Atlanta, GA

- Spearheaded long-term development of an automated drive-thru voice ordering system applying natural language processing and AWS cloud technologies.
- Achieved **>30%** time saving and **>40%** improvement in customer engagement.

Pacific Investment Management Company (PIMCO)

**Client Data Science Summer Analyst**

Summer 2019

New York City, NY

- Modeled effects of macroeconomic factors on investment decisions to guide product strategy and revenue forecasting using time-series analysis (ARIMA, GARCH, VAR).
- Presented model viability to the CFO office and initiated long-term development of project.