

# WU YITONG

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## EDUCATION

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### MSc Financial Technology, Nanyang Technological University, Singapore

- Cumulative GPA: 4.20/5
- Core Modules: Machine Learning in Finance, Finance and Risk Management, Quantitative Methods in Finance, Anti-Financial Crime, Python For Data Analysis

### BSc Mathematics with Economics, University College London, United Kingdom

- Qualification Awarded: Upper Second-Class Honours
- Core Modules: Linear Algebra, Analysis, Financial Mathematics, Economics, Financial Economics

## WORK EXPERIENCE

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### Research Assistant, National University of Singapore, Singapore

Dec 2023-Dec 2024

- R Package Development: Led the development and publication of the R package *catalytic* as the first author, incorporating advanced Bayesian methodologies. Authored detailed documentation and co-authored a related paper with my supervisor.
- Research and Innovation: Analyzed Catalytic prior distributions and their applications to generalized linear models and Cox regression models. Developed a new method using *rstan* to improve predictions for GLM binomial distributions, reducing the logarithmic error by 5 times.
- Time Management and Collaboration: Scheduled and managed tasks independently, maintaining consistent progress while meeting all deadlines. Documented detailed notes from each meeting and milestone, ensuring clear communication and structured planning with my supervisor.

### Data Engineer, Oversea-Chinese Banking Corporation, Singapore

Jul 2022-Aug 2023

- Automated Trade Reconciliation: Developed and implemented the Trade Automation Smart Process Robot, reducing Malaysia's trade reconciliation processing time from over 40 minutes to under 1 minute per trade, handling 1,500+ daily trades error-free.
- System Optimization: Designed Python-based tools for efficient data extraction, comparison, and reporting across various document formats. Led the migration of on-premises systems to Jenkins and introduced PyTest, achieving 80% test coverage for Python scripts.
- Collaboration and Mentorship: Partnered with internal teams to define data processing requirements and align project objectives. Mentored and onboarded interns across multiple projects, improving team productivity and skill development.

### Data Scientist, Singapore Telecommunications Limited, Singapore

Jan 2022-Jun 2022

- Clustered and labelled ~100,000 customers with PySpark to enable a new sales structure.
- Analyzed churn behavior using Lifelines, providing actionable insights for management.

### University Python Mentor, University College London, United Kingdom

Oct 2019-Jun 2020

- Developed and delivered coding lessons for underprivileged children.

## RELATED PROJECTS AND EXPERIENCES

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### Equity Price Analytics, NTU, Singapore

Jan 2022-Feb 2022

- Developed coding structures to generate long-short equity pairs for Pairs Trading strategy by using Simple and Exponential Moving Averages.

### NLP in Toxic Comment Classification, NTU, Singapore

Oct 2021-Feb 2022

- Remodelled machine learning methods, such as LSTM, to enhance efficiency and accuracy in toxic comment classification compared to Logistic regression models.

### Car Rental Blockchain Smart Contract, NTU, Singapore

Dec 2021-Jan 2022

- Designed a smart contract using Solidity to execute the daily functions of car rental companies.

### Machine Learning in Human Facial Expression Recognition, NTU, Singapore

Jul 2021-Oct 2021

- Built facial recognition models using PyTorch and scikit-learn, achieving 76% accuracy.

### Cryptography Simulation Project, UCL, United Kingdom

May 2019-Jun 2019

- Simulated and presented Diffie-Hellman key exchange methods for encryption and decryption.

## SKILL & INTERESTS

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### IT Skills:

- Major: Python (PyTorch, Pandas, PyTest, etc), R (stats, rstan, testthat, devtools, etc), SQL
- Others: Git, AWS, Jenkins, Jira, Bitbucket, Confluence, UML, Cucumber, HTML, CSS, JavaScript

**Language:** Mandarin (Native), English (Fluent), Japanese (JLPT N2)

**Interests:** Sudoku, Bodybuilding, Bread Making, Hiking, Travelling (UAE, Sri Lanka, Maldives, etc)