Theo Obadiah Teguh

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EDUCATION

University of Hong Kong

Sep 2025 - Jul 2026

Master of Statistics (Incoming)

Hong Kong SAR

• Academic Awards: Belt and Road Scholarship in Statistics and Data Science (Full Tuition, 2025-2026)

University of Hong Kong

Sep 2021 - May 2025

Bachelor of Economics and Finance, 2nd Major in Computer Science

Hong Kong SAR

- **CGPA:** 3.65/4.30 (First Class Honours)
- **Academic Awards:** Dean's Honours List (2021-2024), HKU Entrance Scholarship (Full Tuition, 2021-2025), Chan Tat Chee Memorial Education Abroad Scholarship (2023-2024)
- Coursework: Software Engineering, Data Structures & Algorithms, Relational Databases, Computer Hardware & Operating Systems, Computer Networks, Object-Oriented Programming, Functional Programming, Mathematical Finance, Advanced Econometrics, Statistical Learning, Artificial Intelligence, Linear Algebra

PROFESSIONAL EXPERIENCE

Machine Learning Researcher (Incoming)

Jul 2025 - Aug 2025

Shanghai Jiao Tong University

Shanghai, PRC

Data Scientist

Jul 2024 - Dec 2024

Oxbridge Economics, LLC

Hong Kong SAR

- Designed and implemented a stratified sampling algorithm with **scikit-learn, Pandas,** and **NumPy** based on a 56 GB data warehouse, decreasing error by 59% relative to prior benchmarks. (<u>more details</u>)
- Conducted **feature selection** of predictive covariates for gradient-boosted trees (XGBoost) models, and conducted cross-validation and Bayesian hyperparameter tuning.
- Spearheaded **research on optimization** of the sampling algorithm with tools such as the simulated annealing Monte Carlo method and cross-entropy or Kullback-Leibler divergence.

DevOps Engineer Mar 2024 - Apr 2024

Vancouver School of Economics, UBC

Vancouver, Canada

- Reduced **software deployment** time by 50% via recursive synchronization of dependencies. (<u>more details</u>)
- Automated CI/CD with Bash and GitLab CI mitigating risk of error in a project of 30+ developers.

Data Engineer

Jun 2023 - Sep 2023

Faculty of Business and Economics, HKU

Hong Kong SAR

- Developed an automated **ETL pipeline** with **Pandas, NumPy, ElementTree,** and **AWS RDS MySQL** to process a purchased 35 GB bond holdings **XML** data package from the **Morningstar SFTP** system. (<u>more details</u>)
- Obtained a 95% overall data pipeline speed improvement, reaching top download speeds of 13 MBps.

ACHIEVEMENTS AND PROJECTS

Citadel Trading Challenge - 1st Place (*more details***)**

Oct 2024

• Brainstormed and solved a complex mathematical trading simulation game, achieving 1st place amongst 30 select participants across 6 teams from the University of Hong Kong.

QRT Data Challenge - Top 46% Worldwide (more details)

Oct 2024

• Trained a multilayer perceptron neural network and a gradient-boosted trees classifier to predict football game outcomes. Attained accuracy of up to 50% and competed against 800+ contestants worldwide.

Glassdoor Sentiment Analysis with BERT-Twitter (more details)

Dec 2024

• Set up development infrastructure and library dependencies on a virtual machine in a GPU farm provided by the HKU HPC Laboratory to run HuggingFace models on a 3.4+ million textual employer ratings from Glassdoor in a coursework project with Tower Research Capital fund managers.

BigTwo Card Game (more details)

Dec 2024

• Designed a multiplayer card game supporting up to four users with Java. Gained a deeper understanding of OOP, threads, concurrency, synchronization, locks, network sockets, and GUI design utilizing Java Swing.

OTHER EXPERIENCE

Teaching Assistant for COMP1117 & COMP2113/ENGG1340

Sep 2023 - Present

- Responded to Q&A forums on Python control statements, functions, data structures, recursions, and file I/O.
- Led tutorials on Linux and Bash, C and C++ programming, Git version control, and compilation with Makefiles.

TECHNICAL SKILLS

- Programming Languages Python, R, C, C++, Java, Haskell, Bash, SQL
- Data Science Frameworks Pandas, scikit-learn, Hugging Face, ElementTree, Tidyverse
- Cloud and Development AWS (EC2, S3, RDS, Cloudfront, Route 53), Git, GitLab CI, GDB, Valgrind
- Miscellaneous Agile Development, CI/CD, Software Development Life Cycle, Bloomberg Terminal, LaTeX