Yuk Fung Angus Chan

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SUMMARY

Data-driven and self-motivated PhD candidate with a strong record of deriving actionable insights from complex, real-world data. Proficient in statistical analysis and machine learning with Python and R, with experience collaborating on research and industry projects. Seeking a data scientist role to apply technical expertise and drive impactful, data-informed business decisions.

WORK EXPERIENCE

Postgraduate Teaching Assistant, UCL **Sep 2022 - Sep 2024**

- Guided 100 undergraduate students in mapping crime data using R, providing hands-on support during class and organizing weekly Q&A sessions to reinforce learning and address questions.
- Instructed 50 undergraduate students in STATA for statistical analyses, including hypothesis testing, linear regression, and logistic regression, focusing on building their analytical and practical skills.

Research Consultant, UCL consultancy **Jan 2023 – Jan 2024**

- Collaborated with a police force and a software company within a research team to design and conduct an experiment evaluating user experiences with an online crime reporting portal.
- Developed and delivered a comprehensive 53-page report, combining statistical analysis (t-test, ANOVA, linear regression) and Natural Language Processing (NLP) on participants' qualitative feedback using R and Python.

PROJECT EXPERIENCE

Fraudulent Transaction Detection with Supervised ML Methods

- Analyzed 284,807 credit card transactions to detect fraudulent activity, leveraging four machine learning models: Logistic Regression, Random Forest, Naïve Bayes, and Multilayer Perceptron.
- Addressed class imbalance by implementing Synthetic Minority Oversampling Technique (SMOTE), enabling a fair comparison of model performance.
- Evaluated and compared model performance on key metrics, finding that Random Forest achieved the highest robustness, with an F1 score of 87%, precision of 94%, and recall of 86%, both with and without SMOTE, and without fine-tuning.

EDUCATION

PhD in Security and Crime Science, UCL **Sep 2021 - Mar 2025 (exp.)**

- Applied advanced statistical analyses, including meta-analysis, multivariate regression, and ANOVA throughout PhD research to investigate patterns of social dynamics in policing context.
- Relevant coursework: Applied Data Science; Simulation for Research

Master of Social Sciences in Criminology, University of Hong Kong **Sep 2018 – Aug 2019**

Bachelor of Social Sciences in Psychology, University of Hong Kong **Sep 2014 – Aug 2018**

ADDITIONAL INFORMATION

- **Technical Skills**: Statistical analysis (e.g., hypothesis testing, regression analysis, ANOVA), Machine learning (e.g., supervised and unsupervised learning, model evaluation, feature engineering), Large Language Models (LLMs), Natural Language Processing (NLP)
- **Programming languages**: Python, R, SQL
- **Languages**: English (fluent), Mandarin Chinese (fluent), Cantonese (native)