Yuk Fung Angus Chan

cyfangus@gmail.com • +44 (0) 7565 863791 • www.linkedin.com/in/cyfangus/ • cyfangus.github.io

Summary

Analytical PhD researcher passionate about Data Science and Machine Learning. Experienced in applying statistical analysis and advanced modelling to deliver insights across interdisciplinary domains, including social and crime sectors. Eager to leverage technical skills and research background in a data scientist position focused on solving real-world challenges.

Skills & Tools

- **Programming:** Python (Base, Pandas, Numpy, Scikit-Learn, Keras), R ,SQL, STATA
- **Statistical & Machine Learning:** Linear Regression, Logistic Regression, Decision Trees, Random Forest, XGBoost, ARIMA, MLP
- **Others:** Data Visualisation (Tableau, Matplotlib), MS Office, Github, Jupyter Notebook, PyCharm

Data Science Projects

Fraudulent Transaction Detection (Python)

- Applied and compared multiple supervised learning algorithms, including Logistic Regression, Random Forest, Naïve Bayes, and Multilayer Perceptron (MLP), on a dataset of over 280,000 transactions for fraud classification.
- Demonstrated that combining Random Forest with Synthetic Minority Over-sampling Technique (SMOTE) achieves high precision and recall, highlighting an approach to developing cost-effective, transparent, and explainable fraud detection models.

Crime Hotspot Prediction (R)

- Conducted geospatial analysis on open-sourced crime data extracted via police API, identifying violent and sexual crime as primary concerns in the Southwest Borough Command Unit in London.
- Visualized crime concentrations and conducted ARIMA forecasting to inform police resource allocation and support predictive policing practices aimed at enhancing community safety.

Work Experience

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

- Designed and executed an A/B experiment to assess the impact of procedural justice follow-up emails on citizens' satisfaction and willingness to use an online crime reporting portal. Statistical analysis using t-tests and linear regression showed that recipients of high procedural justice emails exhibited approximately 30% higher positive attitudes toward portal usage compared to those receiving lower procedural justice communications.
- Applied Natural Language Processing (NLP) methods to analyse and summarise open-ended survey feedback, utilizing techniques such as word cloud generation and thematic text mining to extract key insights and provide detailed recommendations for improving the portal.
- Delivered a comprehensive 53-page report outlining project objectives, methodology, findings, and strategic recommendations, effectively communicating insights to clients with varying levels of technical expertise.
- Facilitated monthly meetings with clients to maintain clear communication, review progress, and address ongoing project needs.

Education

PhD in Security and Crime Science, UCL **Sep 2021 - Sep 2025**

- Designed and conducted research using advanced statistical analyses to generate actionable insights for effective protest policing strategies.

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**