

# Chan Mun Fai

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## EDUCATION

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### Imperial College London

Oct. 2021 – Oct 2022

*MSc in Artificial Intelligence*

*London, United Kingdom*

- Predicted First with average of 77% in taught modules
- Relevant modules: Machine Learning, Computer Vision, Reinforcement Learning, Deep Learning, Natural Language Processing, Robot Learning and Control
- Group Project on *How well do Self-Supervised Learning transfer to Medical Imaging*; won £500 for best poster; in midst of submitting paper to MDPI Journal of Imaging
- Individual thesis on *Deep Generative Models for Improving Video Prediction*
- Activities: Artificial General Intelligence Safety Reading Group, AI Governance Reading Group

### London School of Economics and Political Science(LSE)

Sep. 2018 – June 2021

*BSc in Econometrics and Mathematical Economics(EME)*

*London, United Kingdom*

- First class honours with average of 79% across all years
- Selected into elite research-intensive EME degree in penultimate year
- Awarded highest mark for dissertation on “*Empirical Evaluation of Generic Machine Learning inference: estimating heterogeneous causal effects in RCTs*”; invited for presentation at *Knowledge Beyond Boundaries* conference
- Relevant modules: Bayesian Statistics; Machine Learning; Econometrics; Operations Research; Mathematical Methods; Probability, Distribution Theory and Inference; Computational Data Science (audited Masters course)

### iXperience Summer Programme

Jun. 2019 – Aug 2019

*6 weeks intensive data science bootcamp*

*Cape Town, South Africa*

- High distinction of 98%; accreditation by University of Virginia
- Coursework : data wrangling, data visualisation, unsupervised and supervised machine learning, text analysis, time series forecasting, feature engineering, A/B testing, hyperparameter optimisation

### Raffles Institution

Jan. 2011 – Dec 2016

*Singapore GCE 'A' Levels*

*Singapore*

- 7 Distinctions; Dean's list(Top 5%) in Economics and General Paper

## EXPERIENCE

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### Research Assistant (RA)

Dec. 2020 – Sep 2021

*Centre of Macroeconomics, London School of Economics*

*London*

- Assisted with data entry, analysis and visualisation for Assistant Professor Ethan Ilzetzki
- Implemented computational macroeconomic models (value iteration) in Python
- Designed pipeline to extract and clean hundreds of historical PDF datasets using Selenium and Regex

### Trainer for Python

Feb. 2021 – Feb 2021

*London School of Economics*

*London*

- Teaching assistant for undergraduate Economic students in Python

### Statistics Research Intern

Jun. 2020 – Sep 2020

*Singapore Department of Statistics(DOS)*

*Singapore*

- Contributed to gap in literature on synthetic data by designing a framework to systematically evaluate quality of synthetic data based on tradeoff between differential privacy and accuracy
- Implemented first publicly available framework into open-source R package
- Recommended best practices that reduced synthesis time from a few hours to < 5 minutes

### Data Science Intern

Jul. 2019 – Aug 2019

*Quicket*

*Cape Town, South Africa*

- Pioneered first data analytics team in the fastest growing ticketing company in Southern and Eastern Africa
- Construct visualisations in R that identifies African markets to invest in; utilised by CEO in investor meeting
- Matched countries' macro growth indices with company's own ticket sales; identified segments to focus on

### Motorised Transport Officer

Jan. 2017 – June 2018

*Singapore Armed Forces*

*Singapore*

- Undergone intensive Officer Cadet School training and led a platoon of 40 men
- Optimise allocation of manpower and vehicular resources – won Best Node award
- Represented transport formation of 2000 men in carrying of formation colours

## LEADERSHIP

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### **Head of Projects** | *LSESU Data Science Society*

Jun. 2020 – Sep 2021

- Lead 11 teams of 45 developers in completing data science projects
- Projects include: causal ML, sentiment analysis for algorithmic trading, prediction of Covid-19 cases, portfolio optimisation, prediction of London house prices, football scouting systems
- Pioneered collaborations with external organisations to give students industry experience

### **President** | *LSESU Students for Children Society (Charity)*

Sep. 2018 – Apr 2020

- Raised £2000 in 2018/19 and £800 in 2019/20 for Save the Children UK; attained LSESU Bronze Star award
- Fostered partnerships with leading mentoring organisations and recruited 20 members into these programmes
- Organised multiple speaker events to raise awareness and provide career advice to students entering NGO industry

## TECHNICAL EXPERTISE AND PROJECTS

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**Languages:** Python, Pytorch, R, Stata, L<sup>A</sup>T<sub>E</sub>X

### **Online Courses**

- Deep Learning Specialisation(Coursera) - Neural Networks and Deep Learning; Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization; Structuring Machine Learning Projects; Convolutional Neural Networks; Sequence Models
- Introduction to Tensorflow for Artificial Intelligence, Machine Learning, and Deep Learning(Coursera); Deep Learning Part 1(fastai); Databases: Modelling and Theory, Databases: Relational Databases and SQL(Stanford Online)

### **Projects**

- Implemented BERT and other language models using Hugging Face to detect patronising language
- Implemented reinforcement learning (DQN, policy-based RL) and planning algorithms from scratch
- Compared multiple self-supervised (SSL) and supervised methods across different datasets in medical domain; demonstrated the lack of generalisability of SSL methods
- Improved SOTA video prediction methods by combining the Kalman filter with sequential variational auto-encoders

## ACHIEVEMENTS

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Public Service Commission(Open) Scholarship, Singapore  
Youth Corps Singapore Leaders Programme  
Highest mark in undergraduate dissertation  
2nd highest mark in Microeconomics in cohort of 700  
4th highest mark in Principles of Econometric in cohort of 160