Chi Yunng Lim

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EDUCATION

MSc in Data Science, London School of Economics and Political Science *September 2024 – September 2025*

- Achieved: Distinction.
- Notable modules include: Machine Learning; Deep & Reinforcement Learning; and Distributed Computing (audited).

BSc in Actuarial Science (Statistics), London School of Economics and Political Science *September 2019 – June 2022*

- Achieved: 1st Class Honours.

PROJECTS

Metalog Distribution Package (Python) *In progress*

- Developing a Python package for metalog distributions implementing quantile-based fitting algorithms, multiple numerical solvers and automatic data subsampling.

Quantifying the Impact of TfL's Superloop Bus Network on House Prices (Python/R/Causal Inference) *August 2025*

- Analysed £500M transport infrastructure impacts using difference-in-differences estimation and spatial econometrics on 50,000+ property transactions.
- Built geospatial datasets integrating TfL APIs, government data, and H3 hexagonal indexing for large-scale urban analysis.
- Led cross-functional team coordination and stakeholder management between academic and industry partners.

Training Agents to Play Parchís (Python/OpenAI Gym/Reinforcement Learning) *April 2025*

- Developed a custom OpenAI Gym environment for Parchís with structured state space encoding to maintain Markovian properties – reduced training time by 85%.
- Implemented and compared Deep-Q Network and Double DQN algorithms to learn optimal strategies – won 63% of games.

Locating Flagellar Motors in 3-D Reconstructions of Bacteria (Python/PyTorch/Computer Vision) *April 2025*

- Implemented and optimized RT-DETR and YOLO object detection models to automate identification of molecular structures in noisy 3D cryo-electron tomography data - achieved 93.8% recall and 88.0% precision.
- Developed preprocessing pipeline to extract and normalize 4,054 2D slices from 362 3D tomograms, handling challenges including low signal-to-noise ratio and 24-pixel target sizes in 512×512 images.

PROFESSIONAL EXPERIENCE

University College London, School of Management

Teaching Assistant *January 2026 – March 2026*

- Selected to support teaching data visualisation through seminars/workshops and coursework assessment for MSc students.

Ageas UK

Actuarial Analyst – Statistical Modelling and Data Science *January 2024 – July 2024*

- Developed and researched alternate statistical distributions for a Monte Carlo simulation model to estimate 99.5% VaR for regulatory capital against Natural Catastrophe risk, improved capital allocation by 1.9%. (SQL/R)
- Saved 10 hours per quarter by automating data cleaning for frozen pipe claims with text-mining. (SQL/Python)
- Optimised company's "Best Estimate" model and reduced process time by 75%. (SQL/Python)
- Achieved promotion from 'Trainee Actuary' position 9 months early.

Trainee Actuary – Data Analysis and Visualisation *September 2022 – January 2024*

- Reduced root mean squared variation to budget by 0.8% by applying time series methods to phase cyclical trends into financial budget. (SQL/R)
- Saved 50+ hours monthly through design and implementation of an end-to-end ETL pipeline for a claims analytics dashboard for the Household business. (SQL/Power BI)
- Collaborated with Pricing team to revamp Long-Term Pricing strategy, modelling, and visualisation process for the Household business. (SQL/R)
- Regularly analysed and valued liability provisions reporting to Chief Actuary and Chief Financial Officer. (SQL/Python)

VOLUNTEERING

Session Organiser, PlayFit Sports & Social (Basketball) *April 2023 – Present*

2nd Team Captain, LSE Men's Table Tennis *September 2024 – June 2025*

ADDITIONAL SKILLS

Programming Languages, Frameworks & Tools: Python, SQL, R, SAS, Pandas, Scikit-Learn, Polars, TensorFlow, PyTorch, OpenAI Gym, XGBoost, PySpark, Git & Github, Google Cloud Platform, Azure, Power BI, Big Query.
Other Skills: Linear & Logistic Regression; Stochastic Simulation; A/B Testing; Causal Inference; Time Series & Forecasting; Dimension Reduction; Feature Engineering; Neural Networks; Model Evaluation; Data Visualisation.