LIANA LING LI YA

Masters of Science (MSc) in Computer Science
Apr 10, Phoenix Park Racecourse,
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This Document: **Coded with LaTeX**

SKILLS

- **Programming:** Python, R, Julia, Microsoft Excel, Jupyter, C++, C♯, Java, ASP.NET, SQL, HTML/CSS/Javascript, VueJS, Quasar
- **Mathematics:** Data Analytics, Applied Statistical Modelling, Statistics and Probability, Monte Carlo Simulation, Quantitative Research Methods
- **Languages:** Native-level English and Chinese; conversational in Malay and Cantonese
- **Interests:** AI Ethics, AI Art, NLP, Quant Research, Philosophy, Social Science

EDUCATION

- **University College Dublin**   Dublin, Ireland

  Masters of Science (MSc) in Computer Science (Machine Learning); *CGPA:3.78*   *Sep 2023 – Sep 2024*
    - Modules: Advanced Machine Learning, Connectionist Computing, Text Analytics, Applied Statistical Modelling, Data Analytics, Monte Carlo Simulation, Generative AI...

- **Tunku Abdul Rahman University of Management and Technology**   Kuala Lumpur, Malaysia

  Bachelor of Computer Science (Honours) in Software Engineering; *CGPA:3.98*   *Oct 2019 – Oct 2022*
  Foundation in Science; CGPA: 4.00/4.00   *Sep 2018 – Sep 2019*

EXPERIENCE

- **Junior Quant Researcher**   Dec 2022 – Sep 2023

  Balaena Quant Sdn Bhd   *Kelana Jaya, Malaysia*
    - Worked with more than 1GB of **time-series** market data
    - **Researched and designed** minute-level statistical arbitrage algorithms for crypto derivatives
    - Wrote scripts to automate large-scale historical data insertion for crypto trading pairs

- **Machine Learning Intern**   June 2022 – Nov 2022

  Datasonic Smart Solutions Sdn Bhd   *Putrajaya, Malaysia*
    - Read through journal papers on speech recognition and computer vision
    - Categorised, labelled and augmented 4000 image data using CVAT
    - Trained YOLOv7 to perform card detection with mAP@.5 of 0.998 using PyTorch
    - Designed UI for an OAuth system and connected to backend using VueJS and Quasar

- **Junior Software Developer**   May 2021 – Jun 2021

  LS SMART MACHINERY (M) SDN BHD   *Seri Kembangan, Malaysia*
    - Communicated and documented stakeholder requirements
    - Researched and reported on competitor analysis and project costing
    - Designed, documented and implemented PostgreSQL database schema
    - Connected application to Stripe API using Golang and Fiber.ctx

- **Chinese-English Translator/Proofreader**   May 2020 – Nov 2021

  RSBAITAI by Turcomp BMB SDN BHD   *Work from home, Malaysia*
    - Translated and proofread 80+ blog articles and 2 published books
    - Created a database using Excel Macros for article tracking

- **Senior Chinese-English Translator/Proofreader**   Aug 2019 – May 2020

  Chill Solutions   *Work from home, Malaysia*
    - Translated 40+ web novel chapters from Chinese to English
    - Proofread and gave feedback on 35+ works by junior translators

- **Chinese Teacher**   Aug 2019 – Oct 2019

  Chempaka Kota Kemuning, Assembly of God   *Shah Alam, Malaysia*
    - Handled 3 classes of age groups ranging from 5 to 15 years old

PROJECTS

- **Prediction of Advanced Prostate Cancer**   Mar 2024 – Apr 2024
  R Language   *Statistical Analysis*
    - Performed data analysis on real-life patient data: **boxplots, correlation, interaction plots**, etc.
    - Identified and dealt with **non-linearity** via **Box-Tidwell test**
    - Applied logistic regression to **model the impact of factors** on the probability of being diagnosed with advanced prostate cancer

- **Air Pollution Analysis in the US**   Feb 2024 – Mar 2024
  R Language   *Statistical Analysis*
    - Identified **multicollinearity** via flipping of signs in regression coefficients

- **Cost Analysis of Nuclear Plant Construction in the US**   Feb 2024 – Mar 2024
  R Language   *Statistical Analysis*
    - **Assessed model validity** by analysing model residuals
    - Improved model fit to **an R^2 of 0.92 and adj. R^2 of 0.85** by including interaction terms
    - Identified important factors that increased the cost of nuclear plant construction

- **Feedforward Neural Network From Scratch**   Nov 2023 – Dec 2023
  Python   *Machine Learning*
    - Implemented an extendable library for customisable neural network architecture
    - Obtained 80% test accuracy on the UCI letter recognition dataset

- **SliGen, AI Automatic Slide Generator**   Oct 2021 – Mar 2022
  Transformer, Python, Flask   *Natural Language Processing*
    - Fine-tuned a HuggingFace T5 model on the ArXiV dataset for title generation
    - Summarised text using transformers, converted into Markdown and generated slides via SliDev
    - Constructed API interface with Flask for linking to web-based application

- **Cataclysm, Cat Detector**   7th Mar 2022
  Haar Cascade Classifier, Python, Threading, Telegram API   *Image Processing*
    - Processed frames from IP camera with haar cascade classifier to detect cat face
    - Sent notifications via Telegram Bot API

- **Summarize, AI Text Summariser**   Sep 2021 – Oct 2021
  Transformer, Python, Jupyter Notebook   *Natural Language Processing*
    - Read through 20+ journal papers and applied 3 abstractive summarisation algorithms
    - Designed an experiment, curated relevant dataset, tested algorithms and produced a comparison report that eventually received 98/100 marks

- **Art Gallery Website**   May 2021 – Oct 2021
  C♯, ASP.NET, VueJS, Tailwind CSS, HTML/CSS/Javascript   *Web Development*
    - Created 5+ pages using self-learned Tailwind CSS and Vue
    - Added intra-page and inter-page functionalities using C♯
    - Designed, documented and implemented SQL Server schema

ACADEMIA

- Ling, L., Amirul Imran Ahmad Azam, Ramanathan Palaniappan, & Tin, T.T. (2021, November 25-27) *Artificial Intelligence Art: Attitudes and Perceptions Toward Human Versus Artificial Intelligence Artworks.* [Paper presentation]. ICHESMET 2021.

ACHIEVEMENTS

- UCD Global Excellence Scholarship (top academic performance)
- TAR UMT President's Award (valedictorian/top performing student)
- TAR UMT President's List certificates (GPA 3.9000 and above)
- TAR UMT Soft Skill Certificates
- TAR UMT Full Academic Scholarship (foundation and bachelor's degree)
- Band 8.5 on a -band scale for IELTS 2022
- Band 5 on a 6-band scale for Malaysian University English Test (MUET) 2019
- Nanjing University Translation in Practice Online Course Certificate
- Cisco Networking Academy CCNA Routing and Switching Introduction to Networks Course
- Most Disciplined Student, Highest Average Score, Highest Number of Modules Completed in 2015, 2016 and 2017 in Secondary School

ACTIVITIES

- **Taman Sri Muda Flood Relief** — 24th, 27th Dec 2021
  Volunteer — *TAR UMT/Shah Alam Gospel Centre*

- **Google #GCPBoleh** — Oct 2021 – Nov 2021
  Self-Learning Student — *Google*
  - Completed 5 Machine Learning and 1 BigQuery Data tutorials on GCP

- **Google Developer Student Club TAR UMT** — Jan 2021 – Oct 2021
  Marketing & Creative Lead — *Google*
  - Managed communication channels on 5 social media accounts
  - Created event posters and relevant captions
  - Hosted and facilitated the event *Meet the Xperts: A Journey in the IT Industry*

- **Programming League National 2020** — 29th Feb 2020
  Participant — *University of Malaya*

- **Innovation and Prototyping Competition 2019** — Feb 2019 – Mar 2019
  Participant — *TAR UMT*

- **Violin for Beginners Level 1, 2 and 3** — Mar 2019 – Dec 2019
  Participant — *TAR UMT*

- **Foundation in Science (Track A)** — Sep 2018 – Sep 2019
  Class Representative — *TAR UMT*
  - Collected fees and printed learning materials for the class
  - Communicated with the school management, lecturers and students