

# RAYMOND WONG

Email: [rwaikwunwong@gmail.com](mailto:rwaikwunwong@gmail.com)

Website: <https://github.com/RaymondWKWong>

Mobile: 07545499522

## ABOUT ME

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**Professional Interests** Machine Learning, Data Science and Visualisation

**Technical Skills** Fluent: Python,  $\text{\LaTeX}$  Experienced: Matlab, Java

## EDUCATION

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**Imperial College London** | PhD Materials Research (2022–2025)

- The research focuses on applied data analytics and machine learning for alloy design and parameter optimisation for metal additive manufacturing (3D printing)

**University of Bristol** | MSc Engineering Mathematics | (Distinction) (2020-2021)

- Notable modules: Research Project (78%), Intelligent Information Systems (78%), Applied Statistics (75%), Research skills (74%), Mathematical and Data Modelling (72%), Optimisation Theory and Applications

**University of West of England** | B.Eng Mechanical Engineering (First Class) (2014-2017)

- Notable modules: Engineering Mathematics 1 (98%), Engineering Mathematics 2 (96%)
- Awards: 2 Dean's List Award

## ONGOING AND PREVIOUS PROJECTS

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**Morgan Stanley** | **Code to Give** (2023)

- Spearheaded a team in the creation of a story generator web app for children with different impairments and mobility limitations, capable of receiving text, speech and sign language inputs
- Proficiently trained convolutional neural networks to accurately interpret sign language and number sign inputs from a user's webcam feed

**OrionHack** | **Space Hackathon** | **2nd Place** (2023)

- Trained LSTM model to predict risk of collisions for satellites and debris
- Visualisation of satellites and debris based on live data, highlighting areas with high risk to mitigate collisions

**Stock Price Forecasting and Buy Sell Recommendation** (2023)

- Web scraped historical financial news and stock prices of S&P500 companies to train LSTM and ARIMA models to predict closing price of a given stock
- Constructed neural network to predict whether to buy, sell or hold a stock based on news

## EMPLOYMENT

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**Imperial College London** | **Graduate Teaching Assistant** (10/2022 – Present)

- Provided support in tutorial sessions for Year 1 and Year 2 Python classes
- Delivered Mathematics tutorials to Year 1 students, responsibilities includes teaching and marking
- Supervised three Master students projects on both data analytics and machine learning for materials science

## PUBLICATIONS

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**Predicting Fabricated Material's Properties and Quality** (2021-2022)

- Constructed multiple machine learning models (DNN, LightGBM, CatBoost etc...) for predicting material properties and quality of print, based on process parameters and material used
- Utilised sensitivity analysis to interpret trained models
- Applied statistical analysis methods to analyse raw data and explore the feasibility of constructed models
- Link to study: <https://doi.org/10.48550/arXiv.2308.16621>

## ADDITIONAL INFORMATION

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**Imperial College London** | **AlgoTrading Committee**

- Engaged with industry leaders to secure sponsorships and assisted delivering machine learning lecture

**JPMorgan Chase & Co.** | **Quantitative Research Virtual Experience Program on Forage**

- Conducted credit risk analysis to predict probability of default, priced commodity of storage contracts, analysed price data and used dynamic programming to convert FICO scores into categorical data