

Gabriel Chu

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EDUCATION

University of Oxford

Oxford, UK

Masters of Engineering in Engineering Science (Information Engineering)

Oct 2020 – Jun 2024

- Ranked 4th/170 and 8th/170 respectively in 2nd and 1st year examinations
- **Awards and Recognition:** Harris Manchester College Scholar, Ashtiany Collection Prize
- **Relevant Coursework:** Statistical Estimation & Probabilistic Inference, Data Structures & Algorithms
Machine Learning, Robust and Optimal Control
- **Proposed Masters Thesis:** Optimisation-based Actions in Double Auctions

EXPERIENCE

Quantitative Research Analyst

Oct 2022 – Jun 2023

Oxford Alpha Fund (Quantitative Strategies Division)

Oxford, UK

- Developed trading strategies identifying and capitalising on lead-lag relationships in the cryptocurrency market
- Back-tested strategies on medium-frequency market data in the presence of realistic trading costs

Cyber Security Engineering Intern

Sep 2022

TÜV SÜD PSB

Singapore

- Designed and improved black-box test methodologies for securing embedded devices
- Performed firmware binary analysis and web-app security assessment for IOT device certification

Software Engineering Intern

Sep 2021

Carbon Codes

Oxford, UK

- Developed chatbot to promote front-end multi-user social media integration for a food sustainability start-up

Vacation Attachment Officer

Singapore

Defence Policy Office (Ministry of Defence)

Jun 2022 – Aug 2022

- Studied regional bilateral relations and security implications of current political developments in ASEAN
- Presented research findings and defence policy recommendations to a panel of Policy directors

Digital and Corporate Transformation Department (Ministry of Defence)

Jun 2021 – Aug 2021

- Planned and effected change management plans for an organisation-wide adoption of Agile CapDev methodologies
- Organised an online engagement session to familiarise a department of 50 colleagues with the Agile method

Defence Cyber Organisation (Ministry of Defence)

Mar 2020 – May 2020

- Re-designed and built a combined relational database for real-time operational intelligence monitoring
- Conducted OSINT research to threat-map Advanced Persistent Threat groups over 19 sectors

PROJECTS

Dri (Undergraduate Capstone Design Project)

Oxford, UK

- Designed an assortment of machine learning pipelines for the classification of biosignals in cough detection
- Performed EMG data collection and tested machine learning classification strategies on subject data

High Performance and Scientific Computing (Coursework)

Oxford, UK

- Wrote programmes on the University of Oxford's HPC high-throughput compute clusters
- Improved Monte-Carlo estimation by re-designing algorithms to utilise GPU optimisation

Research Attachment (Institute for InfoComm Research, A*STAR)

Singapore

- Built a custom interface in C# for the presentation of stimuli in public volunteer trials involving 27 participants
- Designed multi-stage data processing pipeline and performed supervised machine learning on collected EEG data

TECHNICAL SKILLS

Languages: Python, C++/#, MATLAB, CUDA, Visual Basic

Technologies: pandas, Keras, NumPy, Matplotlib, Git, Flask, Simulink, OpenMP, Kali Linux, Unity, VS Code