MADELINE LUI

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SUMMARY

First Class BSc Graduate experienced in statistical computing in R, Python, MATLAB. Proficient in Excel, SQL and PowerBI.

EXPERIENCE

Personal Project

Solar Power Generation Analysis   2024

- **Predictive modelling:** Time-series forecast of PV panel power generation over the following 7 days
- **Data analysis:** Evaluated performance of PV panel system in India over 35 days, using a dataset from Kaggle.

Muckli Lab, Centre for Cognitive Neuroimaging   2023—2024

Research Assistant Intern

The Muckli Lab studies a theory positing that the brain makes active predictions of sensory input from internal models built by prior knowledge.

- **UI Design**: Developed an interactive user interface to present natural images containing object occlusions, using the large Common Objects in Context dataset.
- **Communication skills:** Transformed complex and new ideas of recent research into simple concepts presented during lab meetings.

Bachelor's Thesis Grade: 21/22   2023—2024

Fast learner: My project investigated predictive processes in the human somatosensory cortex using fMRI. I self-learned MATLAB to implement the following statistical methods:

- Multivariate pattern analysis of neural representations of objects, using representational similarity analysis.
- Bootstrap analysis for experimental simulation.

ADDITIONAL TRAINING

Imperial College London   2022

Mathematics course in linear algebra, multivariate calculus and modelling on Python.

AWARDS

BPS Conference Award   2024

Presentation skills: Dissertation research awarded Best Presentation in Cognition and Perception at the annual undergraduate conference hosted by the British Psychological Society.

VOLUNTEERING

Children's Ministry Hong Kong and Scotland   2019 — 2023

- **Leadership:** Led Sunday church programs for children from ages 5-12 and meetings with volunteers.
- **Adaptability:** Reacted to last-minute changes, such as under-staffing, by stepping-in and conflict management.
- **Organisation skills:** Coordinated the curriculum and delegated responsibilities.

PROGRAMMING LANGUAGES

R, MATLAB, Python

EDUCATION

University of Glasgow (First Class Honours)   2020 — 2024
BSc (Hons) Psychology with Neuroscience Specialism
United World College Li Po Chun, Hong Kong
International Baccalaureate Diploma Programme

LANGUAGES

English	Native/bilingual
Cantonese	Native/bilingual
French	Full professional proficiency