MADELINE LUI

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SUMMARY

First class BSc Graduate highly experience in statistical computing in R, Python, MATLAB. Proficient in Excel, SQL and PowerBI.

EXPERIENCE

Personal Project

Solar Power Generation Analysis 2024

- Time-series forecast of PV Panel power generation over the following 7 days
- 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 predictive coding, a theory positing that the brain makes active predictions of sensory input from internal models built by prior knowledge.

- Developed an interactive user interface to present natural images containing object occlusions, using the large Common Objects in Context dataset.
- Presented research and led discussions during lab meetings with excellent communications skills.

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

Title: Cross-modal visual to haptic sensory interactions of familiar and unfamiliar objects using 7-T fMRI.
Supervisor: Prof. Lars Muckli

My project investigated predictive processes in the human somatosensory cortex using fMRI and the following statistical methods in MATLAB:

- 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

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

PROGRAMMING LANGUAGES

R, MATLAB, Python

VOLUNTEERING

Children's Ministry Hong Kong and Scotland 2019 — 2023

- Led Sunday church programs for children from ages 5-12 and meetings with volunteers. Coordinated the curriculum and delegated responsibilities.

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