# 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, University of Glasgow**                                                                          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.
- **Team-player:** Collaboratively worked with post-doctorates across the lab to deliver in-depth experimental data analyses.

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

**Fast learner and self-starter:** 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

**Communication 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

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|---|---|
| **English** | Native/bilingual |
| **Cantonese** | Native/bilingual |
| **French** | Full professional proficiency |