Lingyu Meng

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EDUCATION AND ACADEMIC POSITIONS

09/2023 - Present   **University of Sheffield**
MSc in Systems Neuroscience (GPA: 71; 1st class in UK)

06/2021 - 04/2023   **Beijing Normal University**
Research Assistant; PI: Yina Ma

09/2017 - 07/2021   **Beijing Technology and Business University**
BSc in Statistics

SELECTED RESEARCH EXPERIENCE

06/2024 - Present   **Master Student (Dissertation)**

Individual difference in processing reward, loss, and uncertainty

University of Sheffield; Advisor: Dr. Hazem Toutounji, Dr. Alekhya Mandali

The primary aim of this research project is to investigate how individual differences in psychiatric traits, specifically anxiety, impulsivity, and intolerance of uncertainty influence decision-making strategies in the context of reward or loss. The study seeks to understand how these traits affect individuals' value-based decision-making behaviour and how they interact with each other. (GitHub)

- Built computational model to investigate the relationship of intolerance of uncertainty, impulsivity and exploration (Kalman filtering and GLMM)
- Deployed online experiment (2-armed bandit) on Gorilla
- Programmed analysis code (R and MATLAB) and performing data analysis
- Wrote up the manuscript
- Approved submissions and paid bonuses via Prolific

08/2022 - 04/2023   **Full-Time Research Assistant**

Beijing Normal University; Advisor: Prof. Yina Ma

The iEEG study aims to investigate the neural underpinning (synchronisation) of group decision making and bounding.

- Integrated MRI and CT to localise and label electrodes of intracranial electroencephalography (iEEG) by FieldTrip and FreeView
- Utilised LASSO, latent profile analysis (LPA), PCA to analysis behaviour pattern in inter-group conflicts
- Performed neural data cleaning, wavelet transform and time frequency analysis
- Utilised random forest to decoding economic games behaviour from neural data

06/2021 - 08/2022   **Volunteer Research Assistant**

The mechanism of leadership helping group survival from between group conflict

Beijing Normal University; Advisor: Prof. Yina Ma; in collaboration with: Dr. Hejing Zhang;

This study aims to establish a normative model to prove the leadership structure has advantage in terms of evolution.

- Conducted literature reviews on evolutionary games theory

- Programmed evolution models to investigate the role of leadership in inter-group conflicts using MATLAB

CONFERENCE POSTERS

Meng, L., Mandali, A. & Toutounjin, H. (2024, Jun 29). *Individual difference in processing reward, loss, and uncertainty* [Poster presented]. the Annual Conference of Postgraduate Taught, Sheffield, Yorkshire, United Kingdom. (poster)

Meng, L. (2024, Mar 25-28). *Neural Mechanisms Underlying the Enhanced Cooperation Induced by Multicultural Experience* [Poster presented]. the Society for Social Neuroscience annual meeting, Tsukuba, Ibaraki, Japan. (poster)
The poster above won the Open Science Cash Prize (5000 JPY).

SELECTED TRAINING

07 - 14 /09/2024   Summer School

Computational Psychiatry Course (CPC) Zurich 2024

University of Zurich & ETH Zurich, Switzerland

31/7 - 03/08 /2024   Summer School

1st Computational Decision Neuroscience Summer School

Affiliated Mental Health Center, Zhejiang University School of Medicine, China

31/07/2024   Workshop

ECR workshops, UK Neural Computation 2024

University of Sheffield, UK
- Workshop on Grant Writing

OTHER RESEARCH EXPERIENCE

07/2024 - Present   Volunteer Research Assistant

University of Sheffield; PI: Dr. Myles Jones; In collaboration with: Satwika Rahapsari

- Recruiting adolescents participants and running experiment (EEG)

17/06/2024   Collaborator (Participant-like)

AI Replication Games (A Big Team Science Project)

Project Leader: Dr. Abel Brodeur, Dr. David Valenta;

This is an international large-scale research project aimed at investigating how using AI can affect scientific practice in terms of replication. I collaborated with two assigned partners to reproduce the code of a published study.

04/2024   Data Analysis and Visualisation

Remote collaboration fuses more citable ideas (Now)
- Re-analysed and visualised the data published in Nature and confirmed the presence of selection bias. In contrast to the original paper, I found that remote collaboration may exhibit higher quality. (Github)