

Lee Kean Mun

✉ contact@keanmunlee.com | 🌐 keanmunlee.com

EDUCATION

Nanyang Technological University

Aug. 2023 – Present

PhD Candidate | EMPOWER Centre | Supervisor: Prof. Victoria Leong | Expected Aug. 2027

- **Thesis (Tentative):** “From Infant-Directed Interaction to Neuropersonalised Digital Learning: Enhancing Learning via Neural Entrainment.”
- **Engineered** an Automated Audio-Visual Speaker Diarization pipeline for dyadic mother-infant interaction analysis; presented at BUCLD 51 (2026).
- **Co-inventor** of a neuropersonalised socially-responsive digital avatar for early learning (Singapore Provisional Patent No. 10202600691W); accepted at IEEE TALE 2026.
- Characterising acoustic properties of Infant-Directed Speech and mechanisms of Neural Entrainment to investigate face-to-face and screen-mediated early learning, with implications for digital education policy.

University of Nottingham

Aug. 2016 – May 2020

Bachelor of Science in Psychology | First Class Honours

- **Thesis:** “The Effects of Personality on Memory Interventions.” Investigated individual differences in memory outcomes across personality profiles.
- Collated a Big-5 Personality database ($N = 428$) for university students; project awarded a Research Grant.

EXPERIENCE

Nanyang Technological University

Mar. 2022 – Aug. 2023

Research Assistant | Cambridge-NTU CLIC | Supervisor: Prof. Victoria Leong

- Assessed the construct validity of Cognitive Flexibility, clarifying its relationship to executive function and learning outcomes in healthy young adults.
- Established a centralised anonymised data repository to enable compliant data sharing with international research collaborators.

National University of Singapore

Jan. 2021 – Jan. 2022

Research Assistant | NUS Yong Loo Lin School of Medicine

- *Sleep and Health Lab (Supervisor: Dr. June Lo):* Examined cognitive consequences of chronic sleep restriction under varied and fixed schedules; proficient in Polysomnography, Actigraphy, and Sleep Scoring.
- *AWAKE Lab (Supervisor: Dr. Julian Lim):* Analysed structural and functional MRI data to investigate the relationship between sleep deprivation and sustained attention.

University of Nottingham

Sep. 2018 – May 2020

Research Assistant

- *Supervisor: Dr. Steve Janssen (Sep. 2018 – May 2020):* Contributed to the **Psychological Science Accelerator's** large-scale cross-cultural study on face perception; findings published in *Nature Human Behaviour*.
- *Supervisor: Dr. Nicholas Holmes (Jun. – Aug. 2019):* Investigated neuromodulatory effects of TMS on somatosensory tactile thresholds across the median and ulnar nerve distribution.

PUBLICATIONS

Journal Articles – First-Authored

- [1] **Lee, K. M.**, Mun, J. Y. Y., Choong, E. L., & Janssen, S. M. J. (2024). Associations between Big-Five personality traits and attitudes and perception towards health behaviours. *Psychological Reports*, 129(5), 3872–3896.
<https://doi.org/10.1177/00332941241302805>

Journal Articles – Co-Authored

- [2] Tong, K., Fu, X., Hoo, N. P., **Lee, K. M.**, Vassiliu, C., Langley, C., Sahakian, B. J., & Leong, V. (2024). The development of cognitive flexibility and its implications for mental health disorders. *Psychological Medicine*, 54(12), 3203–3209. <https://doi.org/10.1017/S0033291724001508>
- [3] Tong, K., Chan, Y. N., Cheng, X., . . . , **Lee, K. M.**, . . . , & CLIC Phase 1 Consortium. (2023). Study protocol: How does cognitive flexibility relate to other executive functions and learning in healthy young adults? *PLoS ONE*, 18(7), e0286208. <https://doi.org/10.1371/journal.pone.0286208>
- [4] Jones, B. C., DeBruine, L. M., Flake, J. K., . . . , **Lee, K. M.**, . . . , & Coles, N. A. (2021). To which world regions does the valence-dominance model of social perception apply? *Nature Human Behaviour*, 5(1), 159–169. <https://doi.org/10.1038/s41562-020-01007-2>

Conference Papers & Presentations

- [5] Ramanathan, M., **Lee, K. M.**, Santhanakrishnan, P., Huang, Z., Low, N. E. Q. H., Tan, K. J., Tan, J., & Leong, V. (2026, December). A neuropersonalised socially-responsive digital avatar for young learners. *IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE 2026)*. (Accepted for publication)
- [6] **Lee, K. M.**, Ramanathan, M., Zhang, S., Tan, J. K. A., Zhang, H., Ozcelik, T., Dutta, A., Phan, D. T., Polanczyk, G., Fatori, D., & Leong, V. (2026, November). *Automated audio-visual speaker diarization of mother–infant interactions* [Poster presentation]. 51st Annual Boston University Conference on Language Development (BUCLD 51), Boston, MA, United States.
- [7] **Lee, K. M.**, Santhanakrishnan, P., Tan, J. K. A., Ramanathan, M., Bisio, I. S., Kwa, E. H. A., Ng, J. K., Tan, R. Y. W., Teo, R. H. L., & Leong, V. (2025). Optimising screen-based learning for children with neuropersonalised acoustic ostensive signals. *AI for Children: Healthcare, Psychology, Education @ ICLR 2025*. <https://openreview.net/forum?id=NWBGG8wkXz>

Patent

- [8] Leong, V. V. E., Ramanathan, M., **Lee, K. M.**, & Santhanakrishnan, P. (2026). Socially responsive neuropersonalized digital avatar for learning and entrainment. *Singapore Provisional Patent*, Application No. 10202600691W (NTU Ref: 2025-537).

AWARDS & SCHOLARSHIPS

NTU Research Scholarship

Dean's Excellence Scholarship

Summer Research Internship Grant

Nanyang Technological University, 2023 – 2027

University of Nottingham, 2017–2018 & 2019–2020

University of Nottingham, 2019

TEACHING & SUPERVISION

Nanyang Technological University

Aug. 2023 – Present

Teaching Assistant | School of Social Sciences

- **Research Supervision:** Currently co-supervising 2 FYP students; previously supervised 2 FYP students and 2 research interns.
- **Modules:** HP1000 Introduction to Psychology; HP2200 Biological Psychology; HP2100 Research Design and Data Analysis in Psychology; HP3708 Biopsychosocial Criminology.
- **Duties:** Delivered tutorials, facilitated seminars, and provided marking and written feedback on literature review and experiment proposals.

SKILLS

Programming Languages : Python, R, MATLAB, Bash, Arduino

Data Analysis & Visualisation : SPSS, matplotlib

Neuroimaging & Lab Techniques : EEG (EEGLAB), Polysomnography, Transcranial Magnetic Stimulation (TMS)

Research Platforms : PsychoPy, Qualtrics, Open Science Framework (OSF)

Tools & Workflow : LaTeX, GitHub, Zotero