Jiayi Li

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EDUCATION

National University of Singapore, Singapore — Aug 2024 - Jun 2026
Master of Computing, Specialisation in Artificial Intelligence. WES GPA: 3.70/4.00.

University of Nottingham, United Kingdom — Sep 2016 - Jun 2020
BSc (Hons) Computer Science with Artificial Intelligence, First Class Honours. WES GPA: 3.70/4.00.
LI-YIP Yio Chin Scholarship 2016; Head Scholarship for Top Academic Performance, 2017-2018.

RESEARCH PROFILE

Research Interests:
AI for Psychology and Social Science; LLM individual and social simulation; Trustworthy AI; Longitudinal and multimodal health modelling; Spiking Neural Network.

Experience In: Python, PyTorch, Hugging Face Transformers, vLLM, LoRA/PEFT, LLM agents, Git, Docker.

Test: GRE 331 (Verbal 162, Quant 169, AW 4.0); IELTS 7.5.

Personal Interests: Origami, botany, and puzzle solving.

RESEARCH AND WORK EXPERIENCE

Research Assistant, XTRA Lab, National University of Singapore — Jan 2026 - Present
Supervisors: Dr Zhaomin Wu and Professor Bingsheng He.

- **LongCounsel-8:** Led construction of a symptom-labelled longitudinal counselling benchmark, providing controlled depression trajectories and consistent patient histories for evaluating change across sessions.
- Designed multi-agent generation around latent symptom states, behavioural cues and cross-session memory to maintain symptom and narrative consistency; evaluated realism and symptom recoverability against real counselling data.
- **EmoTrack:** Led training and evaluation of a depression-assessment method combining LLM-derived clinical features with dialogue embeddings, preserving symptom-level evidence alongside conversational context.
- Reproduced baselines and designed ablations and cross-dataset evaluations to test the contribution of clinical features and historical context; analysed leakage and missed-case risk to assess reliability.
- **Human-respondent simulation:** Developing LLM-based respondent simulation to support reproducible studies of human behaviour, with an emphasis on the validity of simulated responses for psychology and social science.
- **SAGE:** Prototyping an LLM-enabled humanoid robot in an NUS-NUHS collaboration, exploring low-cost cognitive assessment and health self-management for older adults through conversation.

Research Intern, Lins Lab, National University of Singapore — Jan 2025 - Jun 2025

IT Operation and Business Operation, BMW Group, Beijing, China — Jun 2021 - Jul 2023

Software Testing Engineer Intern, Gaosi Education Group, Beijing, China — Jun 2018 - Sep 2018

PUBLICATIONS

- **Jiayi Li**, Zhaomin Wu, Bingsheng He. "LongCounsel-8: A Benchmark Suite for Longitudinal Depression Tracking from Multi-Session Counseling Dialogues." NeurIPS 2026 GenAI4Health Workshop (Oral)
- Zhaomin Wu, **Jiayi Li**, Bingsheng He. "EmoTrack: Robust Depression Tracking from Counseling Transcripts across Session Regimes." NeurIPS 2026 (Main Track)

SELECTED PROJECTS

Selected Machine Learning Projects — 2024 - 2025

- **LMSYS preference prediction:** Fine-tuned Llama with LoRA to evaluate chatbot responses against human preferences.
- **Emoji entailment:** Combined BERT text embeddings with frozen CLIP visual features to model how emojis modify sentence meaning, addressing information lost in text-only representations.
- **Bitcoin fraud detection:** Modelled transaction relationships with graph neural networks and compared them with a Random Forest baseline; explored unsupervised detection to address scarce fraud labels.

VitaArc: AI-Native Longitudinal Health Platform (iOS and Android) — Jan 2026 - Present

- Led development of a health platform that unifies wearable, document and manual records; designed validated agent tools so users can capture, retrieve and update health histories through conversation.

Paperbox: Flexible Personal Research Workstation (paperbox.party) — Aug 2026 - Present

- Solo-built a free-form canvas connecting literature organisation, agent interactions and citation-aware drafting; integrated metadata retrieval and Overleaf export to carry sources from exploration into manuscript writing.

Synkin: Conversational Task and Project Manager (iOS and macOS, pre-release) — Aug 2026 - Present

- Built an agent that turns meeting recordings and spoken updates into reviewable task and project changes, keeping plans current and surfacing next actions to reduce manual task maintenance.