Mengyu Zhong, Social Robotics/ Multi-modal Deep Learning

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PROFILE

PhD Student at Uppsala Social Robotics Lab, interested in Social Robotics, Machine Learning, and AI for healthcare.

EDUCATION

Feb 2021 — Present
PhD in Computer Science , Uppsala University — Sweden
Supervised by Ginervra Castellano
Thesis title: Socially assistive robotics: robot-assisted diagnosis of women's depression around childbirth

Sep 2018 — Dec 2020
MSc in IT and Cognition, University of Copenhagen — Denmark
GPA 11.6/12

Aug 2019 — Dec 2019
Exchange student, University of North Carolina at Chapel Hill — America

Jan 2019 — Jun 2019
Guest Student, IT University of Copenhagen — Denmark
GPA 12/12

Sep 2013 — Jun 2017
BEng in Mechanical Engineering, South China University of Technology — China

EXPERIENCE

Jul 2020 — Sep 2020
Data Scientist Internship, Architecture Quote — Copenhagen
Develop data engineering pipelines and train machine learning models to automate house price estimation.

Jun 2019 — Jul 2020
Research Assistant, University of Copenhagen — Copenhagen
Independently lead a research project on haptic interaction devices while also providing support for other group projects in in Human-Centric Computation.

Feb 2018 — Aug 2018
Deep Learning Algorithm Internship, Deep North — China
Supervise three interns in the algorithm department, concentrating on data engineering pipelines and documentation, and coordinate with the foreign annotation team. Additionally, test new deep learning models.

PROJECTS

May 2021 — Present
Robot-assisted Perinatal Depression Diagnosis — [Multi-modal ML] [Human-robot interaction]
Investigate the feasibility and acceptability of robot-assisted diagnosis for perinatal depression by conducting Human-Robot-Interaction studies. Develop multi-modal deep learning models for automatic depression diagnosis.

Feb 2021 — Present
Mom2b: Mobile Big Data for Perinatal Depression Diagnosis — [Multi-modal ML]
Utilize machine learning techniques on longitudinal mobile data to predict the onset of perinatal depression.

Jul 2019 — Jun 2020
Air-table: Haptic Interactive Device — [HCI]
Design and prototype a haptic interactive device, integrating both hardware and software components, and conduct user studies with the prototype.

Feb 2019 — Jun 2019
Multi-modal Machine Learning for Music Genre Classification — [Multi-modal ML]
Applied Random Forest, SVM, Neural Networks, and deep learning techniques to classify music genres using features from three modalities: audio, images, and lyrics.

Feb 2019 — Jun 2019
Machine Learning for Authership Attribution — [NLP]
Employed both classical machine learning methods and deep learning techniques, including BERT, for the task of authorship attribution.

HONORS & AWARDS

Sep 2018 — Jun 2020	Danish Government Scholarship	University of Copenhagen
Oct 2015	Scholarship for Outstanding Students and the "Merit Student"	South China University of Technology
May 2015	Third Prize in "Midea Cup" intelligent electrical kitchen utensils design competition	Guangzhou
Oct 2014	Scholarship for Outstanding Students and the "Merit Student"	South China University of Technology

SKILLS

- Fast Learner
- Problem Solving
- Leadership
- Adaptability
- Communication
- Analytical Skills
- Teamwork
- Interdisciplinary research
- Machine Learning
- Data Science
- Web Development
- Multimodal Deep Learning
- Human Robot Interaction

LANGUAGES

Mandarin	Native speaker	Swedish	Beginner
English	Working proficient		

PUBLICATIONS

[1] Bilal, A., Fransson, E., Bränn, E., Eriksson, A., Zhong, M., Gidén, K., ... Papadopoulos, F. (2022). Predicting perinatal health outcomes using smartphone-based digital phenotyping and machine learning in a prospective Swedish cohort (Mom2B): Study protocol. BMJ Open, 12(4).

[2] Zhong, M., van Zoest, V., Bilal, A. M., Papadopoulos, F. C., & Castellano, G. (2022). Unimodal vs. multimodal prediction of antenatal depression from smartphone-based survey data in a longitudinal study. ICMI '22: Proceedings of the 2022 International Conference on Multimodal Interaction, 455–467.

[3] Zhong, M., Bilal, A. M., Papadopoulos, F. C., & Castellano, G. (2021). Psychiatrists' views on robot-assisted diagnostics of peripartum depression. Social Robotics: 13th International Conference, ICSR 2021 Singapore, Singapore, November 10–13, 2021 Proceedings, 464–474.

[4] Tanqueray, L., Paulsson, T., Zhong, M., Larsson, S., & Castellano, G. (2022). Gender fairness in social robotics: Exploring a future care of peripartum depression. Proceedings of the 2022 17th ACM/IEEE International Conference on Human-Robot Interaction (HRI '22), 598–607.

[5] Paulsson, T., Zhong, M., García Velázquez, I., & Castellano, G. (2023). Exploring mothers' perspectives on socially assistive robots in peripartum depression screening. HRI '23: Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction, 486–490.

[6] Zhong, M., Fraile, M., Castellano, G., & Winkle, K. (2023). A case study in designing trustworthy interactions: Implications for socially assistive robotics. Frontiers in Computer Science, 5.

[7] Kim, H., Everitt, A., Tejada, C., Zhong, M., & Ashbrook, D. (2021). MorpheesPlug: A toolkit for prototyping shape-changing interfaces. Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21). Association for Computing Machinery, New York, NY, USA, Article 101, 1–13.

[8] Savage, V., Tejada, C., Zhong, M., Ramakers, R., Ashbrook, D., & Kim, H. (2022). AirLogic: Embedding pneumatic computation and I/O in 3D models to fabricate electronics-free interactive objects. Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology (UIST '22). Association for Computing Machinery, New York, NY, USA, Article 9, 1–12.