Zining (Annie) Wang

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Education

University of British Columbia, Master of Science in Computer Science — Sept 2024 – Present

University of British Columbia, Bachelor of Science in Computer Science — Sept 2019 – May 2024

- GPA: 4.0/4.0

Industry Experience

Machine Learning Researcher Intern, Honda Research Institute Japan Co., Ltd, Saitama, Japan — May 2023 – Dec 2023

- Analyzed and preprocessed 160,000 rows of datasets from peer-reviewed research articles on emotion recognition and state-of-the-art emotion-detection models.
- Developed large-scale NLP models for emotion classification with 76% F1 score, a 20% improvement over the prior model.
- Designed customized emotion labels to align with social robots' behavior, enhancing human-robot interactions.
- Produced a first-author research paper under the mentorship of eminent advisors.

Data Scientist Intern, Faculty of Medicine, University of British Columbia, Vancouver, BC — Jan 2022 – Mar 2023

- Constructed knowledge graphs and streamlined online survey workflows, reducing daily tasks by 15%.
- Prepared actionable analysis reports to improve clinical survey designs.

Database Developer, Digital Solution, Faculty of Medicine at UBC, Vancouver, BC — Sept 2021 – Dec 2021

- Built an automated data pipeline and user interface for metadata sharing of 2000+ clinical studies.
- Designed a fundraising analysis web app using JavaScript and SQL, improving decision-making by 80%.

Publications

Ain't Misbehavin' - Using LLMs to Generate Expressive Robot Behavior — 2024

Zining Wang, Eric Nichols, *"Ain't Misbehavin' - Using LLMs to Generate Expressive Robot Behavior in Conversations with the Tabletop Robot Haru"*. ACM/IEEE International Conference on Human Robot Interaction (HRI), 2024.

Projects

LLM-based Chatbot for Stress Detection and Regulation

- Designed and implemented an LLM-driven chatbot for stress detection and intervention based on cognitive behavioral therapy concepts.

Estimating Treatment Effect with Deep Learning

- Evaluated deep learning models for causal inference on simulated medical datasets (7,500+ records, 160+ covariates), improving bias and coverage analysis.

Technical Skills

Languages: Python, MATLAB, R, C++, Java

Technologies: TensorFlow, PyTorch, AWS, MySQL, REDCap.

Research Interests: Signal processing, natural language processing, affective computing.

Additional Interests

- Deep appreciation for Japanese culture and language, cultivated during an internship in Japan
- Enthusiastic about interdisciplinary collaboration in affective computing, psychophysiology, and machine learning.