Yahang Qi

yahang.qi@mail.utoronto.ca | github.com/yahang-qi | Google Scholar

Research areas: statistical learning theory, causal inference, and large language models (LLMs).

Education

2025– Ph.D. in Statistical Sciences, University of Toronto.

2023–2025 M.Sc. in Computational Science and Engineering, ETH Zurich.

2018–2023 B.Eng. in Mechanical Engineering, Tongji University.

Research Experience

2024–2025 Temporally Adaptive Personalized Models for ICU Outcome Prediction, Swiss Paraplegic Research & ETH Zurich.
Built a temporally adaptive personalized ICU outcome model based on transformer pretraining (MIMIC-III/IV) with efficient patient-specific fine-tuning. Tested full fine-tuning, adapters, and LoRA, achieving ~25% accuracy gains with minute-level adaptation speed.

2024 Irregular Time Series Modelling for Daily Monitoring of SCI Individuals, Swiss Paraplegic Research & ETH Zurich.
Built an attention-based model for irregular time series with static features (AUC 0.92 for autonomic dysreflexia prediction), designed post-hoc explainability analyses, and implemented robust missing-value handling.
Code: github.com/yahang-qi/Attn-Irregular-Time-Series.

Publications

2024 Implicit Personalization in Language Models: A Systematic Study (EMNLP 2024).
ETH LRE Lab & Max Planck Institute for Intelligent Systems, Tübingen.
Paper: arxiv.org/abs/2405.14808v1; Code: github.com/jiarui-liu/IP.

Under Review Causal Responsibility Attribution for Human-AI Collaboration.
Max Planck Institute for Intelligent Systems, Tübingen.
Paper: arxiv.org/abs/2411.03275; Code: github.com/yahang-qi/Causal-Attr-Human-AI.

Work Experience

2023 Research Intern in Causal Inference and Model Fine-tuning, Shanghai AI Lab.
Processed and standardized computational and experimental properties for 50M PubChem compounds; fine-tuned Uni-Mol for downstream property prediction; and incorporated prior physicochemical knowledge via collider regression.

2022 Research Intern in Autonomous Driving Algorithm, Shanghai Volkswagen Motor.
Built a TensorRT model quantization pipeline (50% memory reduction, 25% inference speedup), developed 2D/3D detection visualization tools, and supported large-scale GPU training and deployment.

Skills

Programming: Python (NumPy, Pandas, PyTorch, Pyro), Bash, Git, Linux, SQL.

ML & Statistics: deep learning, theory of causal inference, causal inference with LLMs, empirical process.

Data: irregular and multivariate time-series, structured data, missing-data, large-scale dataset handling.

Systems: Linux, multi-GPU training, TensorRT, cloud training.

Languages

Chinese (Native); English (Proficient); German (Fluent).