YUFEI LI

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RESEARCH INTERESTS

Large Language Model, Efficient Training & Serving Systems, Reliability & Uncertainty, Natural Language Processing

EDUCATION

University of California, Riverside — Sep 2022 – Jun 2025 (Expected)
Ph.D. in Electrical and Computer Engineering (GPA: 4.0 / 4.0) — Riverside, CA

University of California, San Diego — Sep 2018 – Jun 2020
M.S. in Electrical and Computer Engineering — San Diego, CA

Xi'an Jiaotong University (XJTU) — Sep 2014 – Jun 2018
B.S. in Mechanical Engineering — Xi'an, China

EXPERIENCE

Research Intern — Jun 2024 – Sep 2024
Google DeepMind — Project: Reinforcement learning for generic rewrite LLM — Mountain View, CA

Research Intern — May 2022 – Aug 2022
NEC Laboratories America, Inc. — Project: Log anomaly detection using dynamic graph — Princeton, NJ

Research Intern — May 2021 – Aug 2021
NEC Laboratories America, Inc. — Project: Distantly-supervised information extraction — Princeton, NJ

Research Assistant — Aug 2020 – May 2022
University of Texas at Dallas — Project: AI-empowered system software — Dallas, TX

Research Intern — Jul 2019 – Sep 2019
Seek Truth Corporation — Project: Pose recognition & character detection — Beijing, China

SELECTED PUBLICATIONS (* denotes equal contribution)

Y. Fu, **Y. Li**, W. Xiao, C. Liu, Y. Dong. Safety Alignment in NLP Tasks: Weakly Aligned Summarization as an In-Context Attack. *Annual Meeting of the Association for Computational Linguistics (ACL) 2024*.

Y. Li, X. Yu, Y. Guo, Y. Liu, H. Chen, C. Liu. Distantly-Supervised Joint Extraction with Noise-Robust Learning. *Findings of the Association for Computational Linguistics (ACL Findings) 2024*.

Y. Li, Y. Liu, H. Wang, Z. Chen, W. Cheng, Y. Chen, W. Yu, H. Chen, C. Liu. GLAD: Content-Aware Dynamic Graphs For Log Anomaly Detection. *IEEE International Conference on Knowledge Graph (ICKG) 2023*.

Y. Li, Z. Li, W. Yang, C. Liu. RT-LM: Uncertainty-Aware Resource Management for Real-Time Inference of Language Models. *IEEE Real-Time Systems Symposium (RTSS) 2023*.

Z. Li, A. Samanta, **Y. Li**, A. Soltoggio, H. Kim, C. Liu. R^3: On-device Real-Time Deep Reinforcement Learning for Autonomous Robotics. *IEEE Real-Time Systems Symposium (RTSS) 2023*.

Y. Li, X. Yu, Y. Liu, H. Chen, C. Liu. Uncertainty-Aware Bootstrap Learning for Joint Extraction on Distantly-Supervised Data. *Annual Meeting of the Association for Computational Linguistics (ACL) 2023*.

Y. Li, Z. Li, Y. Gao, C. Liu. White-Box Multi-Objective Adversarial Attack on Dialogue Generation. *Annual Meeting of the Association for Computational Linguistics (ACL) 2023*.

S. Li, **Y. Li**, J. Ni, J. McAuley. SHARE: a System for Hierarchical Assistive Recipe Editing. *Conference on Empirical Methods in Natural Language Processing (EMNLP) 2022*.

K. Chen*, **Y. Li***, Y. Chen, C. Fan, Z. Hu, W. Yang. GLIB: Towards Automated Test Oracle for Graphically-Rich Applications. *International Conference on the Foundations of Software Engineering (FSE) 2021*.

PROJECTS

Concurrent Training and Serving of Large Language Models on Distributed Systems | *PyTorch* | **Code**

- Revealed inefficiencies in traditional "train-then-inference" setups under concurrent LLM workloads, such as continuous serving requests and user-specified post-training alignment feedback
- Developed a dynamic system that efficiently co-locates training and inference tasks on shared resources, optimizing GPU utilization and service-level objectives (SLOs) by runtime resource allocation and execution scheduling

Reinforcement Learning with Decoupled Rewards for Generic Text Rewriting | *Jax, RL5X* | **Google (internal)**

- Introduced a large-scale benchmark dataset for text rewriting across dimensions of factuality, style, and conversation, generated by prompting LLMs, such as Gemini-1.5-Ultra
- Instruction-tuned (SFT) a model and distilled reward models from LLM preferences on sampled SFT responses
- RL fine-tuned the model using decoupled rewards to enhance instruction adherence, coherence, and controllable edits

Content-aware Dynamic Graphs for Log Anomaly Detection | *PyTorch, PyG* | **Code**

- Configured dynamic attributed graphs by identifying log components and their hierarchical relationships
- Proposed a GNN-based temporal-attentive transformer for detecting anomalous edges in dynamic graphs

Assessing the Reusability of Pre-trained Code Embeddings | *PyTorch* | **Code**

- Developed a cost-efficient offline framework to assess the generalizability of embeddings in code analysis tasks
- Evaluated the generalizability of existing pre-trained embeddings leveraging semantic metamorphic relationships

Rethink Negative Sampling in Bayesian Personalized Ranking | *PyTorch* | **Code**

- Identified a limitation of popularity-based sampling due to non-uniform negative sampling biases
- Rectified biases by creating tailored negative sampling distributions to boost Bayesian personalized ranking

Automatic Delivery Vehicle Design | *Python, MATLAB* | **Code**

- Simulated a project integrating the Courier and TSP challenges for autonomous delivery vehicle design
- Formulated a path planning algorithm by incorporating the A* heuristic rules with genetic evolution principles

SKILLS

Programming: Python, C, C++, Java, MATLAB, SQL, Bash, HTML, Markdown

Machine Learning: PyTorch, PyTorch-lightning, PyTorch Geometric (PyG), TensorFlow, Jax, Scikit-learn

Miscellaneous: LaTeX, Git, Ansys, SolidWorks, AutoCAD, Photoshop

HONORS & AWARDS

VEX Robotics International Competitions Sep 2016 – Jun 2017
Team Leader & Programmer Louisville, KY

- Excellent Award and Runner-Up at the VEX Robotics World Championship (RECF) 2017
- Excellent Award and Runner-Up at the VEX Robotics Asia Open 2016
- First-class Award at the VEX Robotics China Open 2016

National Encouragement Scholarship Sep 2014 – Jun 2017
Personal (Top 10% from XJTU) Xi'an, China

AREA CHAIR & REVIEWER

Area Chair: ACL 2024, NAACL 2024

Reviewer: ACL 2025, EMNLP 2023, KDD 2023, CIKM 2022, RTSS 2023, ICSE 2022, FSE 2022