YUFEI LI

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RESEARCH INTERESTS

Natural language processing, Large language model (LLM), Machine learning system (MLSys), Efficient training & inference

EDUCATION

University of California, Riverside Sep 2022 – Jun 2025 (Expected) Riverside, CA

Ph.D. in Electrical and Computer Engineering (GPA: 4.0 / 4.0)

Sep 2018 - Jun 2020

University of California, San Diego 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

Research Intern

Research Intern Jun 2024 - Sep 2024

Project: RLHF for generic rewrite LLM Google DeepMind Mountain View, CA

Research Intern May 2022 – Aug 2022

NEC Laboratories America, Inc. Project: Log anomaly detection using dynamic graph Princeton, NJ

May 2021 - Aug 2021

NEC Laboratories America, Inc. Project: Distantly-supervised information extraction Princeton, NJ

Research Assistant

Aug 2020 – May 2022 Dallas, TX

University of Texas at Dallas Project: AI-empowered software with safety

Jul 2019 - Sep 2019

Seek Truth Corporation Project: Pose recognition & character detection Beijing, China

SELECTED PUBLICATIONS (* denotes equal contribution)

Yu Fu, Yufei Li, Wen Xiao, Cong Liu, Yue Dong. Safety Alignment in NLP Tasks: Weakly Aligned Summarization as an In-Context Attack. Annual Meeting of the Association for Computational Linguistics (ACL) 2024.

Yufei Li, Xiao Yu, Yanghong Guo, Yanchi Liu, Haifeng Chen, Cong Liu. Distantly-Supervised Joint Extraction with Noise-Robust Learning. Findings of the Association for Computational Linguistics (ACL Findings) 2024.

Yufei Li, Zexin Li, Wei Yang, Cong Liu. RT-LM: Uncertainty-Aware Resource Management for Real-Time Inference of Language Models. IEEE Real-Time Systems Symposium (RTSS) 2023.

Zexin Li, Aritra Samanta, **Yufei Li**, Andrea Soltoggio, Hyoseung Kim, Cong Liu. R³: On-device Real-Time Deep Reinforcement Learning for Autonomous Robotics. IEEE Real-Time Systems Symposium (RTSS) 2023.

Shahab Nikkhoo, Zexin Li, Aritra Samanta, Yufei Li, Cong Liu. PIMbot: Policy and Incentive Manipulation for Multi-Robot Reinforcement Learning in Social Dilemmas. International Conference on Intelligent Robots and Systems (IROS) 2023.

Yufei Li, Xiao Yu, Yanchi Liu, Haifeng Chen, Cong Liu. Uncertainty-Aware Bootstrap Learning for Joint Extraction on Distantly-Supervised Data. Annual Meeting of the Association for Computational Linguistics (ACL) 2023.

Yufei Li, Zexin Li, Yingfan Gao, Cong Liu. White-Box Multi-Objective Adversarial Attack on Dialogue Generation. Annual Meeting of the Association for Computational Linguistics (ACL) 2023.

Shuyang Li, Yufei Li, Jianmo Ni, Julian McAuley. SHARE: a System for Hierarchical Assistive Recipe Editing. Conference on Empirical Methods in Natural Language Processing (EMNLP) 2022.

Ke Chen*, Yufei Li*, Yingfeng Chen, Changjie Fan, Zhipeng Hu, Wei Yang. GLIB: Towards Automated Test Oracle for Graphically-Rich Applications. International Conference on the Foundations of Software Engineering (FSE) 2021.

PROJECTS

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, Scikit-learn

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

HONORS & AWARDS

VEX Robotics International Competitions

Sep 2016 - Jun 2017

Louisville, KY

- Team Leader & Programmer
 - 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

Personal (Top 10% from XJTU)

Sep 2014 – Jun 2017

Xi'an, China

AREA CHAIR & REVIEWER

Area Chair: ACL 2024, NAACL 2024

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