

YUFEI LI

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RESEARCH INTERESTS

Natural Language Processing/Generation, Uncertainty Quantification, Efficient LLM Training/Inference

EDUCATION

University of California, Riverside

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

Sep 2022 – Jun 2025 (Expected)

Riverside, CA

University of California, San Diego

M.S. in Electrical and Computer Engineering

Sep 2018 – Jun 2020

San Diego, CA

Xi'an Jiaotong University (XJTU)

B.S. in Mechanical Engineering

Sep 2014 – Jun 2018

Xi'an, China

EXPERIENCE

Graduate Student Researcher

University of California, Riverside

Sep 2022 – Present

Riverside, CA

Research Intern

NEC Laboratories America, Inc.

Project: Content-aware Dynamic Graphs for Log Anomaly Detection

May 2022 – Aug 2022

Princeton, NJ

Research Intern

NEC Laboratories America, Inc.

Project: Distantly-supervised Joint Entity and Relation Extraction with Noise-robust Learning

May 2021 – Aug 2021

Princeton, NJ

Research Assistant

University of Texas at Dallas

Aug 2020 – May 2022

Dallas, TX

Research Intern

SeekTruth Scientific & Technical Corporation

Project: Real-time Pose Recognition for Online Video Stream Character Detection

Jul 2019 – Sep 2019

Beijing, China

SELECTED PUBLICATIONS

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.” *IEEE/RSJ 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.” *ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/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

Distantly-supervised Joint Entity and Relation Extraction with Noise-robust Learning | *PyTorch* | [Code](#)

- Incorporated a pre-trained transformer into sequence tagging scheme for distantly-supervised joint extraction
- Proposed a bootstrap learning framework with a noise-robust loss to dynamically select high-quality instances

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: L^AT_EX, 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

PROGRAM COMMITTEE & REVIEWER

ACL Rolling Review, EMNLP, KDD, CIKM, RTSS, ICSE, ESEC/FSE, ASE