YUFEI LI

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EDUCATION

University of California, Riverside

Riverside, CA

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

Sep 2022 - Jun 2025 (Expected)

University of California, San Diego

San Diego, CA Sep 2018 - Jun 2020

M.S. in Electrical and Computer Engineering

Xi'an, China

Xi'an Jiaotong University (XJTU) B.S. in Mechanical Engineering

Sep 2014 - Jun 2018

Research Area

Natural Language Processing, Uncertainty Quantification, Efficient Large Language Model (LLM) Training & Inference

Work & Research Experience

University of California, Riverside

Riverside, CA

Graduate Student Researcher

Sep 2022 - Present

NEC Laboratories America, Inc.

Princeton, NJ

Natural Language Processing & Data Mining Research Intern

May 2022 - Aug 2022

Project: Content-aware Dynamic Graphs for Log Anomaly Detection

NEC Laboratories America, Inc.

Princeton, NJ

Natural Language Processing Research Intern

May 2021 - Aug 2021

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

University of Texas at Dallas

Dallas, TX

Research Assistant

Aug 2020 - May 2022

SeekTruth Scientific & Technical Corporation

Beijing, China

Machine Learning Research Intern

Jul 2019 - Sep 2019

Project: Real-time Video Frame Orientation Calibration for Online Streaming

SELECTED Publications (Google Scholar)

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.

Assessing the Reusability of Pre-trained Code Embeddings

- 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

- Identified a limitation of popularity-based sampling due to non-uniform negative sampling bias.
- Rectified this bias by creating tailored negative sampling distributions, enhancing Bayesian personalized ranking (BPR) performance.

Automatic Delivery Vehicle Design

- 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.

Honors & Awards

VEX Robotics International Competitions

Louisville, KY

Team Leader & Programmer

 $Sep\ 2016-Jun\ 2017$

- 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

Xi'an, China

Recipient (Top 10 out of 300+ candidates from XJTU)

Sep 2014 - Jun 2017

SKILLS

Programming: Python, C, C++, Java, MATLAB, MySQL, Bash, HTML, Markdown Machine Learning: PyTorch, PyTorch-lightning, TensorFlow, Keras, Scikit-learn Miscellaneous: IATEX, Git, Ansys, SolidWorks, AutoCAD, Adobe Photoshop

Program Committee & Reviewer

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