

# YUFEI LI

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## EDUCATION

<b>University of California, Riverside</b> Ph.D. in Electrical and Computer Engineering (GPA: 4.0/4.0)	Riverside, CA <i>Sep 2022 – Jun 2025 (Expected)</i>
<b>University of California, San Diego</b> M.S. in Electrical and Computer Engineering	San Diego, CA <i>Sep 2018 – Jun 2020</i>
<b>Xi'an Jiaotong University (XJTU)</b> B.S. in Mechanical Engineering	Xi'an, China <i>Sep 2014 – Jun 2018</i>

## RESEARCH AREA

Natural Language Processing, Uncertainty Quantification, Efficient Language Model Training & Inference

## WORK & RESEARCH EXPERIENCE

<b>University of California, Riverside</b> Graduate Student Researcher	Riverside, CA <i>Sep 2022 – Present</i>
<b>NEC Laboratories America, Inc.</b> Research Intern <i>Project: Content-aware Dynamic Graphs for Log Anomaly Detection</i>	Princeton, NJ <i>May 2022 – Aug 2022</i>
<b>NEC Laboratories America, Inc.</b> Research Intern <i>Project: Distantly-supervised Joint Entity and Relation Extraction with Noise-robust Learning</i>	Princeton, NJ <i>May 2021 – Aug 2021</i>
<b>University of Texas at Dallas</b> Research Assistant	Dallas, TX <i>Aug 2020 – May 2022</i>
<b>SeekTruth Scientific &amp; Technical Corporation</b> Research Intern <i>Project: Real-time Video Frame Orientation Calibration for Online Streaming</i>	Beijing, China <i>Jul 2019 – Sep 2019</i>

## 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. R<sup>3</sup>: 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

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### **Content-aware Dynamic Graphs for Log Anomaly Detection** | PyTorch, PyG | [GitHub](#)

- 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 | [GitHub](#)

- 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 | [GitHub](#)

- 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 | [GitHub](#)

- 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 | [GitHub](#)

- 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

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### **VEX Robotics International Competitions**

Team Leader & Programmer

Louisville, KY

*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**

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

Xi'an, China

*Sep 2014 – Jun 2017*

## SKILLS

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**Programming:** Python, C, C++, Java, MATLAB, MySQL, Bash, HTML, Markdown

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

**Miscellaneous:** L<sup>A</sup>T<sub>E</sub>X, Git, Ansys, SolidWorks, AutoCAD, Adobe Photoshop

## PROGRAM COMMITTEE & REVIEWER

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