

Yufei Li

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Research Interests

- Natural language processing and generation, uncertainty estimation, intelligent and interactive systems
- Research goal:** effective, efficient, explainable, and uncertainty-aware AI systems with knowledge and interactions

Education

University of California, Riverside

PH.D. IN ELECTRICAL AND COMPUTER ENGINEERING, ADVISOR: **CONG LIU**, INTELLIGENCE SYSTEM GROUP

Riverside, CA

2022 - 2025 (expected)

University of Texas at Dallas

PH.D. IN COMPUTER SCIENCE, ADVISOR: **CONG LIU** & WEI YANG, INTELLIGENCE SYSTEM GROUP

Dallas, TX

2020 - 2022

University of California, San Diego

M.S. IN ELECTRICAL ENGINEERING, THESIS: APPLICATION OF A* AND GENETIC ALGORITHM IN TSP PATH PLANNING

San Diego, CA

2018 - 2020

Xi'an Jiaotong University

B.S. IN MECHANICAL ENGINEERING, THESIS: AIRCRAFT FUEL TANK OIL SLOSHING SIMULATION BASED ON SPH METHOD

Xi'an, China

2014 - 2018

Work Experience

NEC Laboratories America, Inc.

RESEARCH INTERN (NLP & DATA MINING), PYTORCH

Princeton, NJ

May 2022 - Aug 2022

- Annotated fields (name entities) in raw log messages and applied prompt-based seq2seq BART for field extraction
- Defined hierarchical relationships between fields and configured dynamic attributed graphs for feature representations
- Detected abnormal relationships in log messages using a temporal-attentive Graph Transformer

NEC Laboratories America, Inc.

RESEARCH INTERN (NLP & MACHINE LEARNING), PYTORCH

Princeton, NJ

Jun 2021 - Aug 2021

- Annotated name entities and relations with regular expression rules on CVE texts for distant supervision
- Incorporated the pre-trained GPT-2 backbone into a sequence labeling framework for joint entity & relation extraction
- Proposed a bootstrap training procedure for denoising distant labels and selecting high-quality instances

SeekTruth Scientific and Technical Corporation

RESEARCH INTERN (CV & MACHINE LEARNING), TENSORFLOW

Beijing, China

Jul 2019 - Sep 2019

- Built a joint key point & pose recognition model for character detection, and refined an adaptive discrimination definition model
- Designed a lightweight CNN for real-time calibration of online video frame directions

Publications

PIMbot: Policy and Incentive Manipulation for Multi-Robot Reinforcement Learning in Social Dilemmas

SHAHAB NIKKHOO, ZEXIN LI, ARITRA SAMANTA, **YUFEI LI**, CONG LIU | *IROS 2023* [PDF]

Uncertainty-Aware Bootstrap Learning for Joint Extraction on Distantly-Supervised Data

YUFEI LI, XIAO YU, YANCHI LIU, HAIFENG CHEN, CONG LIU | *ACL 2023* [PDF]

White-Box Multi-Objective Adversarial Attack on Dialogue Generation

YUFEI LI, ZEXIN LI, YINGFAN GAO, CONG LIU | *ACL 2023* [PDF]

SHARE: a System for Hierarchical Assistive Recipe Editing

SHUYANG LI, **YUFEI LI**, JIANMO NI, JULIAN MCAULEY | *EMNLP 2022* [PDF]

Estimating Predictive Uncertainty Under Program Data Distribution Shift

YUFEI LI, SIMIN CHEN, CONG LIU, WEI YANG | *Preprint 2021* [PDF]

GLIB: Towards Automated Test Oracle for Graphically-Rich Applications

KE CHEN*, **YUFEI LI***, YINGFENG CHEN., CHANGJIE FAN, ZHIPENG HU, WEI YANG | *ESEC/FSE 2021* [PDF]

Projects

Enhance the Reliability of Deep Networks on Out-of-distribution Data

NLP & CV, PYTORCH

Dallas, TX

Sep 2021 - May 2022

Assessing the Reusability of Pre-trained Code Embeddings

NLP & SE, PYTORCH

Dallas, TX

Sep 2020 - May 2021

Rethink Negative Sampling in Bayesian Personalized Ranking

DATA MINING & RECOMMENDER SYSTEMS, PYTORCH

San Diego, CA

Nov 2019 - Jun 2020

Automatic Delivery Vehicle Design

PATH PLANNING, PYTHON & MATLAB

San Diego, CA

Mar 2019 - Jun 2019

How Cute is My Pet? Pet Adoption Speed Prediction

NLP & CV, TENSORFLOW

San Diego, CA

Jan 2019 - Mar 2019

Honors & Awards

VEX Robotics International Competitions

ROBOT & PATH PLANNING, C/C++

Louisville, KY

2016-2017

- Excellent award and runner-up in **VEX Robotics World Championship (RECF)** 2017, Louisville, KY, US.
- Excellent award and runner-up in VEX Robotics Asia Open 2016, Beijing, China.
- First-class honor in VEX Robotics China Open 2016, Xi'an, China.

National encouragement scholarship

PERSONAL, TOP10 OF 300+ APPLICANTS.

Xi'an, China

2014-2017

Skills

Language Python, C/C++, JAVA, Bash, HTML, Markdown, MATLAB

Machine Learning PyTorch, TensorFlow, Keras, scikit-learn

Miscellaneous \LaTeX , Git, SQL, Ansys, SOLIDWORKS, AutoCAD, Photoshop

Program Committee & Reviewer

KDD, CIKM, ACL, EMNLP, ICSE, ESEC/FSE, ASE, ICST, RTSS