

Rui Jiao

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Education

- 2021.09 – Present **Ph.D. in Computer Science and Technology**
CS Department, Tsinghua University
Advisor: Yang Liu
- 2017.09 – 2021.06 **B.E. in Computer Science and Technology**
GPA : 3.85/4.0
Senior Thesis: Alternated training with synthetic and authentic data for neural machine translation (A+)

Research Experiments

- 2021.01 – Present **Research Intern, Institute of AI Industry Research (AIR)**
Proposed a 3D molecular pretraining framework named 3D-EMGP from an energy-based perspective, and designed an E(3)-invariance training objective via the Riemann-Gaussian distribution.
First author paper accepted to AAAI 2023.
- 2019.07 – 2020.04 **Research Intern, BizSeer**
Focused on anomaly detection and root cause analysis in microservices.
Paper accepted to IWQOS 2021, KDD 2021 and ISSRE 2020.

Publications

Geometric Graph Neural Networks

- Energy-Motivated Equivariant Pretraining for 3D Molecular Graphs
Rui Jiao, Jiaqi Han, Wenbing Huang, Yu Rong, Yang Liu. AAAI 2023.
- Interpretable Graph Transformer Network for Predicting Adsorption Isotherms of Metal–Organic Frameworks
Pin Chen*, **Rui Jiao***, Jinyu Liu, Yang Liu, Yutong Lu. JCIM.

Neural Machine Translation

- Alternated Training with Synthetic and Authentic Data for Neural Machine Translation
Rui Jiao, Zonghan Yang, Maosong Sun, Yang Liu. Findings of ACL 2021.

Anomaly Detection

- Practical Root Cause Localization for Microservice Systems via Trace Analysis
Zeyan Li, Junjie Chen, **Rui Jiao**, Nengwen Zhao, Zhijun Wang, Shuwei Zhang, Yanjun Wu, Long Jiang, Leiqin Yan, Zikai Wang, Zhekang Chen, Wenchi Zhang, Xiaohui Nie, Kaixin Sui, Dan Pei. IWQOS 2021.
- Multivariate Time Series Anomaly Detection and Interpretation using Hierarchical Inter-Metric and Temporal Embedding
Zhihan Li, Youjian Zhao, Jiaqi Han, Ya Su, **Rui Jiao**, Xidao Wen, Dan Pei. KDD 2021.
- Unsupervised Detection of Microservice Trace Anomalies through Service-level Deep Bayesian Networks
Ping Liu, Haowen Xu, Qianyu Ouyang, **Rui Jiao**, Zhekang Chen, Shenglin Zhang, Jiahai Yang, Linlin Mo, Jice Zeng, Wenman Xue, Dan Pei. ISSRE 2020.

Awards

- 2021  **Excellent Graduate (Bachelor), CS Department of Tsinghua University**
-  **Excellent Graduate (Bachelor), Beijing**
- 2020  **Academic Excellence Award, CS Department of Tsinghua University**
- 2019  **Academic Excellence Award, CS Department of Tsinghua University**
- 2018  **Academic Excellence Award, CS Department of Tsinghua University**
- 2017  **Outstanding Freshman Award, Tsinghua University**