

Yawen Ouyang

♂ Male, born in 1996

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EMPLOYMENT

Institute for AI Industry Research, Tsinghua University

Postdoc researcher

Beijing, China

Sept. 2023 - Present

ByteDance AI Lab

Research intern

Shanghai, China

Dec. 2021 - Mar. 2022

NJUNLP Lab, Nanjing University

Undergraduate intern

Nanjing, China

Sep. 2017 - June. 2018

EDUCATION

Nanjing University

Ph.D. in Computer Science and Technology

Nanjing, China

Sept. 2018 - Sept. 2023

- Thesis: Research on Out-of-distribution Detection Methods for Task-oriented Dialogue Systems
- First-Class Scholarship (*top 20%*), 2019, 2020, 2021

Dalian University of Technology

B.Eng. in Software Engineering

Dalian, China

Sept. 2014 - Jul. 2018

- National Scholarship, 2016
- Outstanding Undergraduate Thesis (*top 3%*), 2018

RESEARCH INTEREST

- AI for materials science: material property prediction, material generation
- Open-environment natural language understanding

SELECTED PUBLICATION

*: equal contributions, †: corresponding author

- **A Periodic Bayesian Flow for Material Generation**

Hanlin Wu, Yuxuan Song, Jingjing Gong, Ziyao Cao, Yawen Ouyang†, Jianbing Zhang, Hao Zhou, Wei-Ying Ma, Jingjing Liu
Accepted by **ICLR 2025 (Spotlight)**

- **MoMa: A Modular Deep Learning Framework for Material Property Prediction**

Botian Wang*, Yawen Ouyang*, Yaohui Li*, Yiqun Wang, H.-R. Cui, Jianbing Zhang, Xiaonan Wang, Wei-Ying Ma, Hao Zhou
Accepted by **AI4MAT-ICLR 2025 (Spotlight)**

- **Towards Extrapolation in Deep Material Property Regression**

Mianzhi Pan, Jianfei Li, Yawen Ouyang, Wei-Ying Ma, Jianbing Zhang, Hao Zhou
Accepted by **AI4MAT-ICLR 2025 (Spotlight)**

- **Multi-grained Multi-curriculum Denoising Framework for Multimodal Aspect-based Sentiment Analysis**

Fei Zhao, Chunhui li, Zhen Wu, Yawen Ouyang, Jianbing Zhang, Xinyu Dai
Accepted by **EMNLP 2023**

- **Debias NLU Datasets via Training-free Perturbations**

Qi Guo, Yuanhang Tang, Yawen Ouyang, Zhen Wu, Xinyu Dai
Accepted by **EMNLP 2023**

- **On Prefix-tuning for Lightweight Out-of-distribution Detection**

Yawen Ouyang, Yongchang Cao, Yuan Gao, Zhen Wu, Jianbing Zhang and Xinyu Dai
Accepted by **ACL 2023**

- **Towards Multi-label Unknown Intent Detection**

Yawen Ouyang, Zhen Wu, Xinyu Dai, Shujian Huang, Jiajun Chen
Accepted by **COLING 2022**

- **Energy-based Unknown Intent Detection with Data Manipulation**

Yawen Ouyang, Jiasheng Ye, Yu Chen, Xinyu Dai, Shujian Huang, Jiajun Chen
Accepted by **ACL 2021 (Findings)**

- **Dialogue State Tracking with Explicit Slot Connection Modeling**

Yawen Ouyang*, Moxin Chen*, Xinyu Dai, Yinggong Zhao, Shujian Huang, Jiajun Chen
Accepted by **ACL 2020**

- **Pobe: a generative-based out-of-distribution text detection method**

Yawen Ouyang, Yuan Gao, Shi Zong, Yu Bao, and Xinyu Dai
Accepted by **Journal of Software**

WORKING PAPERS

- MOF-BFN: Metal-Organic Frameworks Structure Prediction via Bayesian Flow Networks
- Generative AI-Powered Inverse Design for Tailored Narrowband Molecular Emitters
- Material-level harmonic surface intelligence of 2D atomic precise catalysts discovery
- Artificial intelligence Assisted Molecule stiffness regulation for low dimensional perovskite single crystals to attain high performance X-ray detection

GRANTS

- National Natural Science Foundation of China Youth Program, Grant No. 62406170, 2025.01-2027.12.

SERVICE

- Reviewer: NeurIPS, ICML, ICLR, ACL, EMNLP, NAACL, etc.
- Teaching Assistant: NLP, Fall, 2021, 2020; Principles and Techniques of Compilers, Fall, 2019, 2018