YINING LU

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EDUCATION

The University of Notre Dame (ND) Notre Dame, IN
Ph.D. in Computer Science and Engineering *Expected: May. 2029*
- Advisor: Dr. Meng Jiang
- Research Interest: Natural Language Processing, Language Model

The Johns Hopkins University (JHU) Baltimore, MD
M.S. in Data Science *May. 2024*

Kean University (WKU) Wenzhou, China
B.A. in Mathematical Science, Minor in Computer Science (Cum Laude) *Jun. 2022*

EXPERIENCE

Research Assistant Aug. 2024 - PRESENT
Department of Computer Science and Engineering, ND *Notre Dame, IN*
- Researching at DM2 Lab: Data Mining towards Decision Making, advising by Dr. Meng Jiang.

Graduate Research Assistant Apr. 2023 - Jun. 2024
Center for Language and Speech Processing, JHU *Baltimore, MD*
- Researched at Intelligence Amplification Lab, advised by Dr. Daniel Khashabi.
- Wrote research papers on topics of tool augmentation, free-text rationales evaluation, and advanced reasoning abilities of language models.

Co-founder Feb. 2022 - Jun. 2022
Aritifical Intelligence Lab, WKU *Wenzhou, China*
- Co-founded WKU AI lab, advised by Dr. Gaurav Gupta.
- Conducted NLP research projects and taught basic NLP tutorials on attention, transformers, word embedding, parsing, etc.

Quantitative Consultant Sep. 2021 - Dec. 2021
Findability Science, Inc *Remote*
- Built a deep factorization machine to estimate the click-through rate of users on advertisements.
- Formulated an unbiased statistical model to estimate the winning probability of bidding price for first-price auction. Created a reinforcement learning model to find the optimal bidding price.
- Researched in the domains of convex multistage problem, nonparametric optimization and Markov decision process, advised by Dr. Gaurav Gupta.

Algorithm Intern Jun. 2021 - Sep. 2021
NetEase, Inc *Hangzhou, China*
- Created a supervised behavior assessment model and a real-time unsupervised anomaly detection model to detect risky behaviors and users.
- Utilized Kubernetes and Flink to deploy the pipelines of real-time risky behavior detection models.

SKILLS AND COMPETENCIES

Programming: Python, MATLAB, R, SQL, SLURM, LaTeX, JAVA

Frameworks: PyTorch, TensorFlow, JAX, Huggingface, Transformers

Communication: Chinese (Native) and English (Proficient)

PUBLICATIONS

- Dongwei Jiang, Guoxuan Wang, **Yining Lu**, Andrew Wang, Jingyu Zhang, Chuyu Liu, Benjamin Van Durme, Daniel Khashabi. *RATIONALYST: Pre-training Process-Supervision for Improving Reasoning*. Under Review. paper
- **Yining Lu**, Dixuan Wang, Tianjian Li, Dongwei Jiang, Daniel Khashabi. *Benchmarking Language Model Creativity: A Case Study on Code Generation*. Under Review. paper
- Zhengping Jiang*, **Yining Lu***, Hanjie Chen, Daniel Khashabi, Benjamin Van Durme, Anqi Liu. *RORA: Robust Free-Text Rationale Evaluation*. Annual Meeting of the Association for Computational Linguistics (ACL) 2024. paper
- Xiao Ye*, Andrew Wang*, Jacob Choi, **Yining Lu**, Shreya Sharma, Lingfeng Shen, Vijay Murari Tiyyala, Nicholas Andrews, Daniel Khashabi. *ANALOBENCH: Benchmarking the Identification of Abstract and Long-context Analogies*. Conference on Empirical Methods in Natural Language Processing (EMNLP) 2024. paper
- **Yining Lu***, Haoping Yu*, Daniel Khashabi. *GEAR: Augmenting Language Models with Generalizable and Efficient Tool Resolution*. Conference of the European Chapter of the Association for Computational Linguistics (EACL) 2024. paper
- **Yining Lu**, Jingxi Qiu, Gaurav Gupta. *ProtSi: Prototypical Siamese Network with Data Augmentation for Few-Shot Subjective Answer Evaluation*. paper
- **Yining Lu***, Changjie Lu*, Naina Bandyopadhyay, Manoj Kumar, Gaurav Gupta. *Functional Optimization Reinforcement Learning for Real-Time Bidding*. Under Review. paper
- **Yining Lu**. *Exact Computation of Transfer Function for Discrete Dynamical System*. manuscript

SERVICE AND TEACHING WORK

Course Assistant: CS 601.471/671 NLP: Self-supervised Models, JHU - Spring 2024

Teaching Assistant: MATH 3291 Internship in the Mathematical Sciences, WKU - Summer 2023

Reviewer: BlackboxNLP Workshop 2024, EMNLP 2023, EMNLP 2022

HONORS AND AWARDS

Summa cum laude, Kean University	*05/22*
2021 Zhejiang Provincial Government Scholarship	*11/21*
2020 Zhejiang Provincial Government Scholarship	*11/20*
2020 - 2021 Academic Year Dean's Scholarship-Research and Innovation	*12/21*
2020 - 2021 Academic Year Dean's Scholarship	*12/21*
2019 - 2020 Academic Year Dean's Scholarship	*11/20*
2018 - 2019 Academic Year Dean's Scholarship	*11/19*

ACADEMIC COMPETITIONS

Mathematical Contest in Modeling *02/21*

*Led three-person team to **Finalist Prize**, Top 1% worldwide*