YINING LU

ylu33@nd.edu | (443) 255-3435 | Personal Website | Linkedin

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, Reinforcement Learning

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

Kean University (KU) — Union, NJ
B.A. in Mathematical Science, Minor in Computer Science (Cum Laude) — *Jun. 2022*

EXPERIENCE

Applied Scientist Intern — May. 2025 - Aug. 2025
Amazon.com, Inc — *Palo Alto, CA*
- Researched at the Rufus foundation model team, working on reinforcement learning for language models.

Research Assistant — Aug. 2024 - PRESENT
Department of Computer Science and Engineering, ND — *Notre Dame, IN*
- Research at DM^2 Lab, working on language models and reinforcement learning.

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.
- Published 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 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.
- Wrote a research paper on convex multistage problem and nonparametric optimization, advised by Dr. Gaurav Gupta.

Algorithm Developer 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.

PUBLICATIONS

- **Yining Lu**, Meng Jiang. *Uncovering Cross-Objective Interference in Multi-Objective Alignment.* Preprint. paper

- **Yining Lu***, Wenyi Tang*, Max Johnson, Taeho Jung, Meng Jiang. *A Decentralized Retrieval Augmented Generation System with Source Reliabilities Secured on Blockchain.* Preprint. paper

- Zhaoyi Joey Hou, Bowei Alvin Zhang, **Yining Lu**, Bhiman Kumar Baghel, Anneliese Brei, Ximing Lu, Meng Jiang, Faeze Brahman, Snigdha Chaturvedi, Haw-Shiuan Chang, Daniel Khashabi, Xiang Lorraine Li. *CreativityPrism: A Holistic Benchmark for Large Language Model Creativity.* Preprint. paper

- **Yining Lu**, Zilong Wang, Shiyang Li, Xin Liu, Changlong Yu, Qingyu Yin, Zhan Shi, Zixuan Zhang, Meng Jiang. *Learning to Optimize Multi-objective Alignment Through Dynamic Reward Weighting.* Preprint. paper

- **Yining Lu**, Noah Ziems, Hy Dang, Meng Jiang. *Optimizing Decomposition for Optimal Claim Verification.* Annual Meeting of the Association for Computational Linguistics (ACL) 2025. paper

- **Yining Lu**, Dixuan Wang, Tianjian Li, Dongwei Jiang, Daniel Khashabi. *Benchmarking Language Model Creativity: A Case Study on Code Generation.* Annual Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL) 2025. paper

- 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.* Annual Meeting of the Association for Computational Linguistics (ACL) 2025. 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: ACL 2025, BlackboxNLP Workshop 2024, EMNLP 2023, EMNLP 2022

SKILLS AND COMPETENCIES

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

Frameworks: PyTorch, TensorFlow, JAX, Huggingface, Transformers

Communication: Chinese (Native) and English (Proficient)

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
Led three-person team to **Finalist Prize**, *Top 1% worldwide*   *02/21*