

# Nan Jiang

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**Education** **Purdue University**, IN, USA Aug 2018 – May 2025  
Ph.D. in Computer Science. Advisor: Yexiang Xue.  
PhD Thesis: Integrating Automated Reasoning with Machine Learning for Structured Prediction and Scientific Discovery.

**Beihang University**, Beijing, China Sep 2015 – Jan 2018  
M.A.Eng. in Computer Science. Advisor: Wenge Rong.  
National Scholarship

**Zhejiang University of Technology**, Zhejiang, China Sep 2011 – Jun 2015  
B.Eng. in Computer Science.  
Outstanding Graduate Student.

**Appointments** **University of Texas - El Paso**, USA Sep 2025 - now  
*Assistant Professor in the Department of Computer Science*

**Amazon Search**, USA 2021 summer, 2020 summer  
*Research Intern on the Product Search group.*

**Microsoft Research Asia**, Beijing, China Dec 2016 - Sep 2017  
*Research Intern in Speech group.*

**Recent Publications** **Nan Jiang**, Ziyi Wang, Yexiang Xue. EGG-SR: Embedding Symbolic Equivalence into Symbolic Regression via Equality Graph. ICLR, 2026.

Haoyang Zheng, Xinyang Liu, Cindy Xiangrui Kong, **Nan Jiang**, Zheyuan Hu, Weijian Luo, Wei Deng, Guang Lin. Ultra-Fast Language Generation via Discrete Diffusion Divergence Instruct. ICLR, 2026.

Jinzhao Li\*, **Nan Jiang**\*, Yexiang Xue. An Exact Solver for Satisfiability Modulo Counting with Probabilistic Circuits. ICML, 2025.

Ziyi Wang, Siva Rajesh Kasa, Ankith M S, santosh Kumar Kasa, Jiaru Zou, Sumit Negi, Ruqi Zhang, **Nan Jiang**, Qifan Song. DIVERSED: Relaxed Speculative Decoding via Dynamic Ensemble Verification. AISTATS, 2026.

**Nan Jiang**, Md Nasim, Yexiang Xue. Active Symbolic Discovery of Ordinary Differential Equations via Phase Portrait Sketching. AAI, 2025.

**Nan Jiang**, Md Nasim, Yexiang Xue. Vertical Symbolic Regression via Deep Policy Gradient. IJCAI, 2024.

**Nan Jiang**, Yexiang Xue. Racing Control Variable Genetic Programming for Symbolic Regression. AAI, 2024.

Jinzhao Li, **Nan Jiang** and Yexiang Xue. Solving Satisfiability Modulo Counting for Symbolic and Statistical AI Integration with Provable Guarantees. AAI, 2024.

**Nan Jiang**, Jinzhao Li, Yexiang Xue. A Tighter Convergence Proof of Reverse Experience Replay. The Reinforcement Learning Journal, 2024.

**Nan Jiang**, Yexiang Xue. Symbolic Regression via Control Variable Genetic Programming. ECML/PKDD, 2023.

**Nan Jiang**\*, Yi Gu\*, Yexiang Xue. Learning Markov Random Fields for Combinatorial Structures via Sampling through Lovász Local Lemma. AAI, 2023.

**Nan Jiang**, Maosen Zhang, Willem-Jan van Hove, Yexiang Xue. Constraint Reasoning Embedded in Structural Prediction. Journal of Machine Learning Research (JMLR), 2022.

**Nan Jiang**, Chen Luo, Vihan Lakshman, Yesh Dattatreya, Yexiang Xue. Massive Text Normalization via an Efficient Randomized Algorithm. WWW, 2022.

Fan Ding\*, **Nan Jiang**\*, Jianzhu Ma, Jian Peng, Jinbo Xu, and Yexiang Xue. PALM: Probabilistic Area Loss Minimization for Protein Sequence Alignment. UAI, 2021.

Maosen Zhang, **Nan Jiang**, Lei Li, Yexiang Xue. Language Generation via Combinatorial Constraint Satisfaction: A Tree Search Enhanced Monte-Carlo Approach. Findings of EMNLP, 2020.

**Teaching**

**Artificial Intelligence for Scientific Discovery** at CS UTEP.

2025 Fall

**Deep Learning** at CS UTEP.

2026 Spring