

# AN YAN

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EDUCATION	<b>Institute for Interdisciplinary Information Sciences (IIIS), Tsinghua University</b> <i>B.E. in Computer Science and Technology</i>	Beijing, China 2024.08 - Present
	<ul style="list-style-type: none"><li>Overall GPA: 3.72/4.0.</li><li>Selected Coursework: Machine Learning (A+), Natural Language Processing (A), AI Principles &amp; Techniques (A+), Algorithm Design (A+), Intro to Computer Systems (A+), Mathematics for CS &amp; AI (A). (<i>Note: Fall 2025 grades are based on instructor notifications; official transcript update pending</i>)</li></ul>	
PUBLICATIONS	<ol style="list-style-type: none"><li>Huigen Ye, Hua Xu, <b>An Yan</b>, Yaoyang Cheng. Large Language Model-driven Large Neighborhood Search for Large-Scale MILP Problems. In <i>Proceedings of the 42nd International Conference on Machine Learning (ICML 2025)</i>, <b>Spotlight</b>.</li><li>Huigen Ye, Hua Xu, <b>An Yan</b>. LLM-driven Streamlining Optimizer for Large-scale Mixed Integer Linear Programming Problems. <i>Submitted to Nature Communications</i> (Under Review).</li></ol>	
RESEARCH EXPERIENCE	<b>Research on Applications of LLMs in Mixed Integer Linear Programming and Combinatorial Optimization</b> <i>Research Assistant, Supervised by Prof. Hua Xu, Tsinghua University</i>	2024.06 - Present
	<ul style="list-style-type: none"><li>Scale neighborhood selection for MILP by evolving heuristic code via a dual-layer LLM agent, enabling zero-shot transfer from small training samples to ultra-large problems with <math>10^6</math> variables, generalizing to diverse combinatorial problems.</li><li>Explored RAG-augmented LLMs for tool-using and long-horizon decision-making in complex optimization pipelines, optimizing branch-and-bound via RAG-initialized code synthesis and iterative Bayesian refinement.</li><li>(Ongoing) Unify MILP encoding with LLM token spaces through learnable graph tokenizers, leveraging SFT for priority score prediction and GRPO RL with greedy construction to directly optimize solution quality.</li></ul>	
SELECTED AWARDS	<ul style="list-style-type: none"><li><b>Scholarship for Outstanding Scientific and Technological Innovation</b>, Tsinghua University</li><li><b>Champion</b>, Huawei Algorithm Competition (University Track)</li><li><b>Gold Medal</b>, 2025 Beijing Collegiate Programming Contest</li><li><b>Gold Medal</b>, 10th China Collegiate Programming Contest (CCPC), Jinan Site</li><li><b>Gold Medal</b>, 40th National Olympiad in Informatics (NOI), China</li></ul>	2025.10 2025.09 2025.04 2024.11 2023.07
SKILLS	<b>Languages:</b> C++, Python (Proficient); Go, Scala, Bash (Familiar). <b>Mathematics:</b> Probability Theory, Stochastic Processes, Abstract Algebra, Combinatorics. <b>Tools:</b> PyTorch, LaTeX, Git, Docker.	