Guowei Sun
Master of Computer Technology

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Profile

I am a graduate student majoring in computer science, engaging in research on EDA, computational geometry, and artificial intelligence throughout my university years. I have published several papers in top conferences and have corresponding patents. My main research focus is on layout and routing problems. Additionally, I am proficient in C++ and Python, with most of my code written in this language. Lastly, I have been honored with the Outstanding Graduate Award from the University of Science and Technology of China for the year 2024.

Education

Master of Computer Technology *University of Science and Technology of China* **Anhui, CHINA** *2021-2024*
Related Courses: Theories and Design of Distributed Algorithms, Machine Learning, Deep Learning, Advanced Computer Networks, etc.

Bachelor of Computer Science and Technology *China University of Petroleum (Beijing)* **BeiJing, CHINA** *2017-2021*
Related Courses: Data Structures, Software Engineering, Design Patterns, and other core computer science courses

Research Experience

Research on EDA algorithm design based on computational geometry and artificial intelligence. Focus on backend design in graph theory algorithms, studying Placement and Global Routing.

- **Rectilinear Steiner Minimum Tree (RSMT),** **Anhui, China** *06/2022 - 12/2022*
Co-first author paper on Rectilinear Steiner Minimum Tree (RSMT) issues, "Towards Large-Scale Routing: A Novel Learning-Based Divide Merge Approach," accepted as a poster by DAC (CCF-A).

- **Timing-Rectilinear Steiner Tree,** *IEEE PDF* **Anhui, China** *1/2023 - 06/2023*
Co-first author paper on timing-driven routing, "Towards Timing-Driven Routing: An Efficient Learning-Based Geometric Approach," officially accepted by ICCAD 2023 (CCF-B) and published.

- **Skew-Rectilinear Steiner Tree,** *Multi-Source-Prim-Dijkstra* **Anhui, China** *12/2023 - Present*
First place in OpenROAD competition with research on routing based on skew-cost minimization, awarded $2500. The competition is supported by UCSD, OpenRoad and DARPA. The results will be submitted to ICCAD 2024

Internship Experience

- **Huawei,Software Development Engineer** **Shanghai, China** *7 /2023 - 9 /2023*
Worked on the development of Linux kernel and Android audio drivers for new chips like HiSilicon; refactored device management and audio algorithm mode switching in the proprietary normalized HAL layer using the Abstract Factory pattern.

- **iFlytek, Assistant Research Algorithm Engineer** **Hefei, China** *2/ 2023 - 4/ 2023*
Conducted research on natural language understanding and reinforcement learning for medical dialogue models, handling real doctor-patient dialogue data from the First Affiliated Hospital of USTC.

Award & Certifications

o **Outstanding Graduate of USTC, 2024**

o **English**: CET6-500

o **Mathematics**: First Prize in Beijing Mathematics Competition; Second Prize in National College Students' Mathematics Competition

o **First Prize** in USTC Academic Scholarship twice, Second Prize once; continuous scholarship recipient throughout undergraduate studies

o **Competitions**: Top 10% in CCF Personal Credit Default Prediction (out of 4000 teams); Top 6% in Ali Tianchi NLP Competition (out of 3600 individuals); Third Prize in Logistics Robot Competition at the university level

o **Other**: Consistent high readership blog