SIYANG CHEN

Sun Yat-sen University ◇ Microelectronic Science and Engineering
School of Electronics and Information Technology
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EDUCATION

Sun Yat-sen University (SYSU) Sep 2022 - Jul 2026(expected)
B.E. in Microelectronics Science and Engineering
Rank: 5/104 (Top 5%), GPA: 4.0/4.0 (4.12/5.0), Average Score: 91.2, CET-6: 621
Outstanding academic performance in Engineering Circuit Analysis, Digital Circuits and Logical Design, Analog Circuits, High Frequency Circuits, Semiconductor Device Physics, Hardware Description Language and FPGA Design, ... (Top 5 in core courses)

RESEARCH EXPERIENCE

Cell Generator: Automated Custom Design of Digital Standard Cells
(Principal Investigator) Sep 2024 - Jan 2025
Supervisors: Prof. Xiangyu Meng SYSU

- Objective: Develop an EDA tool to enable user-defined standard cell dimensions for resolving the limited diversity in standard cell libraries and optimizing circuit performance
- Methodology: Identification + Modification. Identify transistors in the provided layout and modify the width of specified transistors based on input information
- Outcome: Successfully developed an EDA tool to achieve automated generation of standard cell layouts for all logic gates and D flip-flops
- Contributions: Designed data structures, developed transistor identification modules, and optimized code for layout replication

Transformer-Based Automatic Inductor Layout Generation
(Principal Investigator) Dec 2023 - Dec 2024
Supervisors: Prof. Xiangyu Meng SYSU

- Objective: Streamline inductor layout iteration by predicting metal block movement(annotated with labels) using deep learning
- Methodology: Modeled metal blocks as text sequences and trained a Transformer on annotated inductor layout datasets
- Outcome: The model achieves prediction of labels for any metal block in the inductor layout, average accuracy: 97%
- Contributions: Designed the embedding layer of model, alongside comprehensive coding of the entire model architecture

AWARDS

National Scholarship 2024 - 2025
Zhentai Donation Scholarship 2022 - 2023
Sun Yat-sen University Scholarship*3 2022 - 2025
First Prize, National IC Innovation Competition (South China Division) Jul 2025

SKILLS

Software Languages Python, C, C++
Hardware Languages Verilog
Frameworks Xilinx Vivado, PyTorch, LaTeX