

# Wenxiao Xiong

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## Education

**Sun Yat-sen University**, BS in School of Computer Science 09/2021 - 07/2025 (expected)  
Major: Information and Computing Science, GPA: 3.5/4.0  
**Courses:** Deep Learning 92, Data Structures and Algorithms Laboratory 94, Artificial Intelligence Laboratory 93

## Publications

- **AI-Driven Learning and Regeneration of Analog Circuit Designs from Academic Papers** (Accepted by *International Journal of Circuit Theory and Applications*)
- **FrGNet: A Fourier-Guided Weakly-Supervised Framework for Nuclei Instance Segmentation** (Submitted to *IEEE Transactions on Medical Imaging*)
- **BOLD: A Machine Learning Based Dynamic Optimization Framework for Analog Circuit Sizing** (Revision Submitted to *IEEE Transactions on Circuits and Systems I: Regular Papers*)
- **Understanding the Formation Process of Positive Customer Engagement Behaviors: A Quantitative and Qualitative Interpretation** (Accepted by *Asia Pacific Journal of Marketing and Logistics*)

## Experiences

**Trustworthy Multi-Modal Benchmark for Medical Large Vision Language Models (Med-LVLMs), PSU**  
**Supervisor: Prof. Suhang Wang** 06/2024 - Present

- Developed a benchmark for evaluating the trustworthiness of Medical Large Vision Language Models (Med-LVLMs).
- Evaluated Med-LVLMs from the aspects of truthfulness, safety, adversarial robustness, fairness, and privacy leakage.
- Developed attack/defense methods, curated datasets, and designed tasks to evaluate model robustness and trustworthiness.

**Large Language Models for SVG Flowchart Generation, UVa**  
**Supervisor: Prof. Sheng Li** 07/2024 - Present

- Developed a framework to generate SVG flowcharts from textual descriptions using Large Language Models (LLMs).
- Fine-tuned LLMs to transform semantic descriptions into annotations and convert annotations into SVG code.
- Compiled a dataset of SVG flowcharts based on academic papers for training and evaluation.

**AI-Driven Learning and Regeneration of Analog Circuit Designs, SYSU**  
**Supervisor: Prof. Xiangyu Meng** 08/2023 - 08/2024

- Developed an AI-based framework for learning and regenerating analog circuits from academic literature.
- Utilized Faster R-CNN for circuit element detection and Bayesian optimization for performance simulation.
- Achieved 97% accuracy in element detection and developed an automated pipeline for extraction and simulation.

**FrGNet: A Fourier-Guided Weakly-Supervised Framework for Nuclei Instance Segmentation, SYSU**  
**With: Dr. Peng Ling** 01/2024 - 09/2024

- Proposed a weakly-supervised framework for accurate nuclei instance segmentation in histopathologic images.

- Made guidance masks via Fourier transforms for segmentation and boosted features via instance-level contrastive learning.
- Achieved high accuracy segmentation with minimal annotated data, surpassing state-of-the-art methods on public datasets.

### **Automatic Labeling of Metal Blocks in GDS Layout Using Large Language Models, SYSU**

**Supervisor: Prof. Xiangyu Meng**

05/2024 - Present

- Used LLMs to automatically label metal blocks in GDS layouts based on position and connections.
- Collected and processed a large dataset of labeled metal blocks and fine-tuned Meta-Llama-3-8B for labeling.
- Developed a pipeline to convert GDS layouts into input sequences for accurate labeling, improving design automation.

### **BOLD: Machine Learning Based Dynamic Optimization Framework for Analog Circuit Sizing, SYSU**

**Supervisor: Prof. Xiangyu Meng**

06/2023 - 03/2024

- Developed a machine learning framework for dynamic optimization of analog circuit sizing.
- Implemented algorithms to explore design parameters and adapt to evolving constraints.
- Improved optimization efficiency, enhancing circuit sizing and mastering model selection and tuning.

### **Understanding Positive Customer Engagement: The Impact of Cognition and Emotion on Behavior**

**Supervisor: Dr. Luning Zang**

10/2023 - 02/2024

- Analyzed how cognitive and emotional factors influence positive customer engagement using AI and NLP techniques.
- Fine-tuned BERT for multi-label classification of customer reviews.
- Achieved 92% accuracy in classifying engagement factors.

## **Skills**

**Software:** PyCharm, Anaconda, VMware Workstation, Draw.io, Adobe Suite

**Programming:** Python, Pytorch, JavaScript, C++, C

## **Awards**

- Mathematical Contest In Modeling Meritorious Winner (TOP 10 %) 2023
- National College Student Mathematical Modeling Competition (Guangdong Province) Third Prize 2022
- CSP-JS Non-professional Software Capability Certification Advanced Level Round 2, Second Prize 2019, 2020