

Hui Shen

Columbus, OH | shen.1780@buckeyemail.osu.edu | marcusshen1227.github.io | github.com/NastyMarcus

Education

The Ohio State University, B.S. in Computer & Information Science

Graduated in Dec.2024

- GPA: 3.95/4.0, Major GPA: 4.0/4.0, Summa Cum Laude

Core Courses

- **Mathematics:** Calculus, Linear Algebra, Probability and Statistics, Discrete Mathematics
- **Computer Science:** Software Development and Design, Data Structures and Algorithms, Computer Network, Principles of Programming Languages, Survey of Artificial Intelligence, Operating Systems, Database Systems, Computer Architecture, Information Security, Network Programming, Knowledge Systems

Publications & Manuscripts

Famba-V: Fast Vision Mamba with Cross-Layer Token Fusion

Hui Shen, Zhongwei Wan, Xin Wang, Mi Zhang

ECCV 2024 The Fourth Workshop on Computational Aspects of Deep Learning (Best Paper Award)

Artificial Intelligence of Things: A Survey

Shakhrul Iman Siam, Hyunho Ahn, Li Liu, Samiul Alam, *Hui Shen*, Zhichao Cao, Bhaskar Krish-namachari, Mani Srivastava, Mi Zhang

ACM Transactions on Sensor Networks

FedAIoT: A Federated Learning Benchmark for Artificial Intelligence of Things

Samiul Alam, Tuo Zhang, Tiantian Feng, *Hui Shen*, Zhichao Cao, Dong Zhao, JeongGil Ko, Kiran Somasundaram, Shrikanth S Narayanan, Salman Avestimehr, Mi Zhang

Journal of Data-centric Machine Learning Research

Attention Entropy-Guided Dynamic Cache Allocation for Efficient Multimodal Long-Context Inference

Zhongwei Wan, *Hui Shen*, Xin Wang, Mi Zhang

Submitted to NAACL, under review.

MTL-SVD: Minimizing Singular Value Truncation Loss for Large Language Model Compression

Xin Wang, Samiul Alam, Zhongwei Wan, *Hui Shen*, Mi Zhang

Submitted to NAACL, under review.

MEIT: Multi-Modal Electrocardiogram Instruction Tuning on Large Language Models for Report Generation

Zhongwei Wan, Che Liu, Xin Wang, Chaofan Tao, *Hui Shen*, Zhenwu Peng, Jie Fu, Rossella Arcucci, Huaxiu Yao, Mi Zhang

Submitted to ICLR, under review.

Benchmarking and Boosting Radiology Report Generation for 3D High-Resolution Medical Images

Che Liu, Zhongwei Wan, Yuqi Wang, *Hui Shen*, Haozhe Wang, Kangyu Zheng, Mi Zhang, Rossella Arcucci

Submitted to ICLR, under review.

Autoregressive Models in Vision: A Survey

Jing Xiong, Gongye Liu, Lun Huang, Chengyue Wu, Taiqiang Wu, Yao Mu, Yuan Yao, *Hui Shen*, Zhongwei Wan, Jinfa Huang, Chaofan Tao, Shen Yan, Huaxiu Yao, Lingpeng Kong, Hongxia Yang, Mi Zhang, Guillermo Sapiro, Jiebo Luo, Ping Luo, Ngai Wong,

Submitted to TMLR, under review.

Research Interest

Fields: Generative Models, Efficient AI, MLSys, Medical AI

Research Experience

Research Assistant, Advisor: Prof. Mi Zhang

Apr, 2023 – Present

AIoT and Machine Learning Systems Lab, Department of Computer Science and Engineering

The Ohio State University, OH, USA

Selected Projects:

Project: Famba-V: Fast Vision Mamba with Cross-Layer Token Fusion

- Applied token fusion techniques to enhance the training efficiency of Vision Mamba models by selectively fusing similar tokens across layers.
- Developed cross-layer token fusion strategies that optimize the trade-off between accuracy and efficiency, surpassing uniform token fusion methods.

Project: Artificial Intelligence of Things: A Survey

- Conducted a systematic and comprehensive review of Artificial Intelligence of Things (AIoT) research, covering key components of sensing, computing, and networking & communication.
- Led the Computing section of the survey, analyzing and synthesizing research on AIoT computing paradigms, architectures, and techniques

Research Assistant, Advisor: Prof. Jingbo Meng

Sep, 2023 – Sep, 2024

Computational and Statistical Models Group, School of Communication

The Ohio State University, OH, USA

Project: Exploring the role of generative AI on human-human interactions in online social networks for social support

- Developed a GPT-4-based bot designed to interact in online social networks where users seek support for various personal challenges such as bullying, heartbreak, and financial distress
- Investigated the impact of AI-powered interactions on human behavior and support dynamics within online social networks, analyzing how the presence of a generative AI bot influences user responses and overall community support

Teaching Experience

The Ohio State University, OH, USA

Teaching Assistant

Aug, 2024 – Dec, 2024

Systems II: Introduction to Operating Systems (CSE 2431)

Teaching Assistant

Aug, 2024 – Dec, 2024

Introduction to Digital Logic (ECE 2060)

Work Experience

Software Engineering Intern, Swire Coca-Cola China – Hangzhou

June, 2022 – Aug, 2022

- Developed Python scripts and implement Robotic Process Automation (RPA) to streamline workflows for various departments within the company.

Co-founder, Bridge Path Education – Hangzhou

May, 2024 – Present

- Founded and managed an international student transfer consultancy, helping college students pursue educational opportunities abroad.
- Generated significant revenue, achieving profits in the tens of thousands of dollars.

Award

Summa Cum Laude, The Ohio State University

2024

Best Paper Award in ECCV 2024 Workshop, NVIDIA

2024

Microsoft for Startups Founders Hub Member, Microsoft

2024

Skills

Programming Languages: Python, C/C++, Java, SQL, JavaScript, HTML/CSS, C#

Tools and Frameworks: Git, PyTorch, LaTeX, Markdown, Docker, React, Vue