Jucheng Shen

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Education

2022 - 2027 Bachelor of Arts in Computer Science, Mathematics, and Economics at **Rice University**

Research Experience

Research Intern, The University of Texas at Austin May 2025 – Present

- Lead an independent project on test-time scaling for masked diffusion language models, design the core algorithm that accelerates diffusion langague model decoding by up to 50%.
- Run end-to-end evaluations and draft the full paper that gets accepted to NeurIPS 2025 Efficient Reasoning Workshop.
- Collaborate with 3 Intel researchers on a conference paper: run large-scale experiments, refine the algorithm, and draft the paper.

Research Intern, Rice University April 2025 – Present

- Contribute to training-free ultra-high-resolution (2–4K) video generation (SuperGen) with Prof. Yuke Wang's group, propose 2 core ideas integrated into the algorithm; assist with extensive experiments.
- Realize up to 1.19x speedup at 2K and 1.36x at 4K via region-aware caching; with 4 GPUs, achieve up to 1.97x speedup at 2K and 1.46x at 4K with caching.

Leadership

Board Member (Tracks and Workshops), HackRice April 2025 – Present

- Host 2 technical workshops for 100+ attendees; run Q&A and live coding demos.
- Co-design and ship the official starter code used by 500+ hackers (repo).
- Design competition tracks and judging criteria for HackRice 15.

Co-founder & CEO, NudgeBridge Nonprofit Jul. 2022 – Oct. 2024

- Direct 25+ team members to provide educational support for 200+ children; raise $25,000+ through strategic partnerships.
- Manage tutoring programs involving 40+ tutors for rural schools.

Honors & Awards

- Frank Liu Jr. Prize for Creative Innovations in Music, Fashion, & the Arts in Rice Launch Challenge.

Publications

- **Jucheng Shen**, Yeonju Ro. Beyond Static Cutoffs: One-Shot Dynamic Thresholding for Diffusion Language Models. 2025 (September). Preprint.
- Fanjiang Ye, Zepeng Zhao, Yi Mu, **Jucheng Shen**, Renjie Li, Kaijian Wang, Desen Sun, Saurabh Agarwal, Myungjin Lee, Triston Cao, Aditya Akella, Arvind Krishnamurthy, T. S. Eugene Ng, Zhengzhong Tu, Yuke Wang. SuperGen: An Efficient Ultra-high-resolution Video Generation System with Sketching and Tiling. 2025 (August). arXiv:2508.17756.

Last updated: September 24, 2025