Chendong Wang

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Educations

- **University of Wisconsin-Madison** — Madison, US
  Ph.D. in Computer Science — *Sept 2021 - Present*
- **University of Minnesota** — Minneapolis, US
  Master of Science in Computer Science (GPA: 3.926/4.0) — *Sept 2019 - Jun 2021*
- **Fudan University** — Shanghai, China
  B.S of Theoretical and Applied Mechanics, Top 20% ; Minor in Data Science — *Sept 2014 - Jul 2019*

Publications

- **Zoomer: Enhancing MLLM Performance with Adaptive Image Focus Optimization** — In submission
  To be revealed
- **CAS: An Edge-Centric Networking Architecture for Disaggregated Storage** — In submission
  Chendong Wang, Ming Liu
- **VoLUT: Efficient Volumetric streaming enhanced by LUT-based super-resolution** — MLSys 2025
  Chendong Wang, Yifan Yang, Lili Qiu, Anlan Zhang, Yuqing Yang, xinyang Jiang, Suman Banerjee
- **Habitus: Boosting Mobile Immersive Content Delivery through Full-body Pose Tracking and Multipath Networking** — NSDI 2024
  Anlan Zhang, Chendong Wang, Yumin Hu, Ahmad Hassan, Zejun Zhang, Bo Han, Feng Qian, Shichang Xu.
- **YuZu: Super-resolution Enhanced Volumetric Video Streaming** — NSDI 2022
  Anlan Zhang, Chendong Wang, Bo Han, Feng Qian.
- **Efficient Volumetric Video Streaming Through Super Resolution** — Hotmobile 2021
  Anlan Zhang, Chendong Wang, Bo Han, Feng Qian.
- **Mobile Volumetric Video Streaming Enhanced by Super Resolution** — MobiSys 2020 Poster
  Anlan Zhang, Chendong Wang, Xing Liu, Bo Han, Feng Qian.
- **Firefly: Untethered Multi-user VR for Commodity Mobile Devices** — USENIX ATC 2020
  Xing Liu, Christina Vlachou, Feng Qian, Chendong Wang, and Kyu-Han Kim.

Internships

- **ByteDance Inc.** — San Jose
  Research Intern, Mentor: Yan Sun — *05/2024 - 08/2024*
  - Developed a topology-aware collective communication optimization framework for PCIe-based GPU clusters, improving P2P bandwidth by up to **30%** through shared memory and chunk size optimizations
  - Investigated RDMA scalability solutions for Expert Parallel inference in large language models, implementing a bitmap pooling mechanism to handle ≥ 1000 queue pairs efficiently
- **Microsoft Research Asia (MSRA)** — Shanghai
  Research Intern, Mentor: Prof. Lili Qiu — *05/2023 - 08/2023*
  - Enhanced the performance of volumetric video streaming by applying an inference speeding up technique called LUT. Provided a frame rate speed up by over **10X**.
  - Surveyed the existing upsampling approach for 3D point clouds and drafted a conference paper for submission.
- **Hewlett-Packard Company (HP)** — Shanghai
  R&D Intern — *10/2018 - 05/2019*
  - Implemented a framework that transfer the text to voice data by adopting WaveRNN
  - Researched on an NLP algorithms with capability of deduction

Research Experience

- **Efficient Volumetric Video Streaming Through Super Resolution** — Minneapolis, US
  University of Minnesota - Advisor: Professor Feng Qian — *09/2019 - Present*
  - Co-Developed a point cloud video streaming system, that leverages super-resolution method to reduce the bandwidth while maintaining visual quality
  - Adopted numerous optimization methods to ensure the streaming frame rate at 30 fps
- **Untethered Multi-user VR for commodity Mobile Devices** — Minneapolis, US
  University of Minnesota - Advisor: Professor Feng Qian — *12/2019 - 02/2020*
  - Co-Developed and conducted the VR experiments on Android platform
  - Co-Designed the metrics and compared the results with baselines
- **Application of Reinforcement Learning in Congestion Control** — Shanghai
  Fudan University - Advisor: Professor Yuedong Xu — *06/2018 – 05/2019*
  - Reproduced the result of Remy, a learning-based congestion control algorithm, as the baseline
  - Worked on designing a DRL method to produce better congestion control results
- **Developing a Traffic Flow Prediction Method Based on LSTM** — Shanghai
  Fudan University (Undergraduate Thesis) - Advisor: Professor Mingmin Guo — *03/2019 - 05/2019*
  - Modeled the basic traffic flow problem and collected dataset with video and simulation
  - Developed an LSTM model that can help the decision of Automated Vehicle based on surrounding traffic flow
- **Developing a Data Visualization Program Based on VR Platform** — Columbus, US
  Ohio State University - Advisor: Professor Chen Jian — *07/2018 - 10/2018*
  - Implemented a visualization system for scientific data in VR environment to support quantum physics research
  - Developed several algorithms to improve the visual effect of the data with high density

Honors & Awards

- **Third prize, China Undergraduate Mathematical Contest in Modeling** 2017
- **Third prize, Elite Experiment Scholarship** 2017, 2018

Technical Skills

- **Programming** Python, C, C++, Matlab
- **Math Skills** Probability & Statistics, Pattern Recognition & Machine Learning, Measure Theory, Discrete Mathematics