Jinyu Chen

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Education

Sun Yat-sen University — Guangzhou, China
M.S. in Computer Science and Technology, School of Computer Science and Engineering — *Sep. 2019 – Present*
Advisor: Prof. Di Wu

Xidian University — Xi'an, China
B.Eng. in Software Engineering, School of Computer Science and Technology — *Sep. 2015 – Jun. 2019*

GPA: 85.5/100 (top 10%)

Research Interests

Computer Networks, Optimization, Video Transmission

Publications

- **Jinyu Chen**, Miao Hu, and Di Wu
  Live360: Optimization of Upstream and Downstream Transmission in Live 360-degree Video Streaming
  ACM International Conference on Multimedia (ACM MM). **Under review**.
- **Jinyu Chen**, Xianzhuo Luo, Miao Hu, Di Wu, and Yipeng Zhou
  Sparkle: User-Aware Viewport Prediction in 360-degree Video Streaming
  IEEE Transactions on Multimedia (TMM). Early Access.
- Zhenxiao Luo, Zelong Wang, **Jinyu Chen**, Miao Hu, Yipeng Zhou, Tom Z. J. Fu, and Di Wu
  CrowdSR: Enabling High-Quality Video Ingest in Crowdsourced Livecast via Super-Resolution
  Network and Operating System Support for Digital Audio and Video (NOSSDAV), Istanbul, Turkey, 2021.

Research Experience

Live360: Rate Adaptation in Live 360-degree Video Streaming (ACM MM) Oct. 2020 – Apr. 2021

- Present a client-server based architecture of live 360-degree video system.
- Formulate two optimization problems of upstream and downstream video transmission.
- Design two novel algorithms based on dynamic programming to allocate bitrates to cameras and tiles.
- Improve the QoE by 0.49 compared to other upstream methods and by 0.72 compared to other downstream methods.

Sparkle: Viewport Prediction in 360-degree Video Streaming (TMM) Oct. 2020 – Apr. 2021

- Conduct an in-depth measurement study on the real traces and summarize some insights.
- Propose a user-aware viewport prediction algorithm in 360-degree video streaming.
- Outperform start-of-the-art baseline algorithms by up to 5% prediction accuracy.

Awards & Honors

- The Second Class Scholarship, Sun Yat-sen University — 2019
- Outstanding Graduate, Xidian University — 2019
- The Second Class Scholarship, Xidian University — 2016-2018

Teaching Assistant

- DCS222: Computer Networks, Spring 2021, Sun Yat-sen University.
- DCS211: Data Structures and Algorithms, Fall 2020, Sun Yat-sen University.

Skills

Languages: C/C++, Python, LaTeX
Tools & Systems: PyTorch, Linux, FFmpeg
Algorithms : Reinforcement Learning, Machine Learning