Haoyu Li

https://0xdkxy.com

Email : lihaoyu.0xdkxy@gmail.com

Mobile : (732) 640-4181

RESEARCH INTEREST

- **Operating Systems: Storage Systems and Filesystem**

EDUCATION

- **Rutgers University – New Brunswick** — New Brunswick, NJ, USA
  Ph.D. in Computer Sciences, **Advisor: Prof. Sudarsun Kannan** — *Sept. 2024 – Present*

- **Central South University** — Changsha, CN
  B.E. in Computer Sciences and Technology — *Aug. 2019 – July. 2023*

PROJECTS

- **SmartPrefetch (ongoing project in RU system lab)**
  - Extending current prefetching to collaborate with the host cache and device cache.
  - New way of prefetching to leverage remote servers for throughput sensitive tasks.
  - Prefetching to reduce tail latency without affecting throughput.

- **AOS**
  - Developed a self-made OS kernel based on the i386 architecture.
  - Supported multi-threading and loading user programs.
  - Implemented a simple ext2-like file system.
  - Included basic I/O and memory management.
  - Created a simple shell for user interaction.

EXPERIENCE

- **Rutgers University** — New Brunswick, NJ, USA
  Teaching Assistant — *Sept. 2024 - Present*
  - Teaching assistant for CS344, undergrad level algorithms course.

- **ByteDance** *data-arch-IES* — Shanghai, CN
  Software Engineer Intern — *Feb 2022 - July 2022*
  - Processed real-time data from Douyin and TikTok utilizing the VCP framework, an advanced and customized version of Apache Flink.
  - Designed and implemented robust data pipelines to ensure efficient and reliable data flow.
  - Conducted performance tuning and optimization of workflows to enhance processing speed and resource utilization.
  - Scaled streaming solutions to accommodate increasing data volumes and ensure seamless performance.
  - Developed and integrated comprehensive performance monitoring tools to track and analyze system metrics, ensuring optimal operation and quick issue resolution.

- **Tencent** *IEG-START Cloud Game* — Shenzhen, CN
  Game Development Engineer Intern — *July 2022 - Aug 2022*
  - Implemented and optimized the rendering model for tree leaves and branches
  - Enhanced the build system for projects
  - Conducted testing and debugging to ensure smooth gameplay.
  - Collaborated with the development team for seamless integration of enhancements.

- **CSUVAG** — Changsha, CN
  Research Assistant Intern, Advisor: Prof. Jiazhi Xia — *Aug 2022 - May 2023*
  - Used and implemented multiple deep metric learning and manifold learning techniques to reduce the dimensions and generate projections of high-dimension data.
  - Built a visualization system to generate the low-dimension projection of folding and unfolding of high-dimension data.

Honor & Award

- The 2020 ICPC Asia Shenyang Regional Contest, Shenyang, Silver Medal *July. 2021*
- The 2021 ICPC Asia Shanghai Regional Contest, Shanghai, Bronze Medel *Nov. 2021*
- The 2021 ICPC Asia Shenyang Regional Contest, Shenyang, Bronze Medel *Nov. 2021*
- The 2021 CCPC - National Invitational Contest(Hunan), Xiangtan, Silver Medal *Jun. 2021*
- The 2021 Baidu Astar Programming Contest Rank 245/23051 *Aug. 2021*

Programming Skills

- **Languages**: C, C++, Python, Java, Verilog

- **Technologies**: Linux, Git, PyTorch