Feiran (Alex) Qin

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Education

North Carolina State University   2023/08 - 2028/05
Ph.D. in Computer Science   Raleigh, NC, USA
- Advisor: Prof. Marcelo d'Amorim

University of Illinois Urbana-Champaign   2022/08 - 2023/01
Illinois-ShanghaiTech Exchange Program   Champaign, IL, USA
- Advisor: Prof. Tianyin Xu

ShanghaiTech University   2019/09 - 2023/06
B.S. in Computer Science and Technology   Shanghai, China
- Undergraduate Research Advisor: Prof. Zhice Yang

Research Experience

North Carolina State University   2023/08 - Present
Improving Software Reliability, under the advisement of Prof. Marcelo d'Amorim   Raleigh, NC, USA
- Developed an *LLM-based* fuzzing tool to identify bugs in contemporary C compilers.

University of Illinois Urbana-Champaign   2022/08 - 2023/01
Optimizing Serverless Performance, advised by Prof. Tianyin Xu and Jovan Stojkovic   Champaign, IL, USA
- Implemented MXFaaS on KNative to efficiently *multiplex* resources for *concurrent* function invocations.
- Open-sourced as ○ MXFaaS, volunteer contributed, earning all three ACM badges in **ISCA' 23** artifact evaluation.

ShanghaiTech University High-Performance Computing   2020/10 - 2023/06
Core Member, HPC sysadmin, Advisor: Prof. Shu Yin   Shanghai, China
- **ISC'22 SCC**: Led ICON challenge, optimizing MPI-bounded climate simulations in Niagara and Bridges-2 clusters, achieving a 30% performance improvement by reducing *mpi_wait* and enhancing *CPU affinity*.; **placed 4th among 12 globally**.
- **MLSys**: Developed an *DQN-based* scheduler to optimize HPC tasks response times via CUDA kernel profiling (*kernel2vector* transform) and traffic data learning, open-sourced as ○ DASH (beta).

Open-Source Contributions

ICON Climate Model   2024/04
Contributor, NCSU Team   ♥ icon-model
- Developed and integrated *OpenMPx optimizations* for the ICON project.

Anthon Open Source Community   2022/08 - Present
Part-time Linux Maintainer   ○ AOSC OS
- Updated and maintained package recipes for the AOSC OS Linux distribution.

Professional Activities

- **OSDI/ATC 2024**: Artifact Evaluation Committee
- **EuroSys 2023**: Shadow Program Committee
- **SOSP 2023**: Artifact Evaluation Committee
- **OSDI/ATC 2023**: Artifact Evaluation Committee

Contests and Awards

- **8th** of 19, ISC 2024 Student Cluster Competition, Hamburg Germany (Virtual)   2024/05
- **4th** of 12, ISC 2022 Student Cluster Competition, Hamburg Germany (Virtual)   2022/06
- **2nd**, Intel Hackathon, Beijing, China   2020/12