

Qingrong Chen

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EMPLOYMENT

- Facebook AI Infrastructure** 2020.8-Present
Production Engineer
Build HPC scheduler for machine learning jobs inside Facebook.
- Facebook Core Systems** 2019.5–2019.8
Production Engineer Intern
Secure containers inside Facebook by providing encryption support for shared storage.
- University of Illinois at Urbana-Champaign** 2019.8-2020.6
Teaching Assistant for CS 425 (Distributed Systems) and CS 447 (Natural Language Processing)
- University of Illinois at Urbana-Champaign** 2018.8-2019.5
Research Assistant

EDUCATION

- University of Illinois at Urbana-Champaign** **Champaign, USA**
Master of Science in Computer Science 2018.8-2020.6
Siebel Scholar (Class 2020)
MS Thesis: Understanding and Discovering Software Configuration Dependencies in Cloud Systems
- Shanghai Jiao Tong University** **Shanghai, China**
B.S. in Computer Science and Technology 2014.9-2018.6

PUBLICATION

- **Qingrong Chen**, Teng Wang, Owolabi Legunsen, Shanshan Li, and Tianyin Xu, *Understanding and Discovering Software Configuration Dependencies in Cloud and Datacenter Systems*, In Proceedings of the 2020 ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'20), Sacramento, California, Nov. 2020.
- Dimitrios Skarlatos, **Qingrong Chen**, Jianyan Chen, Tianyin Xu, Josep Torrellas, *Draco: Architectural and Operating System Support for System Call Security*, In Proceedings of the 53rd IEEE/ACM International Symposium on Microarchitecture (MICRO'20), Athens, Greece, Oct. 2020.
- **Qingrong Chen**, Chong Xiang, Minhui Xue, Bo Li, Nikita Borisov, Dali Kaafar and Haojin Zhu, *Differentially Private Data Sharing, Sharing Models versus Sharing Data*, In Proceedings of CCS 2019 Workshop on Privacy Preserving Machine Learning (PPML'19), London, UK, Nov. 2019.

RESEARCH INTEREST

Software Engineering, Computer Systems, and Machine Learning

RESEARCH EXPERIENCE

Configuration Dependency Analysis in Large-scale Cloud Systems 2019.3-2020.6

Advisor: Tianyin Xu

Categorize configuration dependencies in modern cloud systems. Build an automated tool named cdep to analyze different types of dependencies (<https://github.com/xlab-uiuc/cdep-fse>).

Hardware and Operating System Support for System Call Checking 2019.3-2019.11

Advisors: Tianyin Xu and Josep Torrellas

Accelerate system call checking by providing both operating system and hardware support. The main idea is to build cache systems for both syscall ID and argument values.

Privacy-Preserving MLaaS 2019.8-2019.10

Advisors: Tianyin Xu and Josep Torrellas

Explore the performance and privacy trade-offs by partitioning the deep neural network between the client and the cloud. Build a privacy-aware MLaaS to explore this trade-off.

Privacy-Preserving Navigation Service 2018.10-2019.12

Advisor: Nikita Borisov

Develop a privacy-preserving navigation service with congestion reporting. The insight is to conduct partition-to-partition navigations and make congestion reporting only over certain segments.

Privacy-Preserving Machine Learning 2019.1-2019.5

Advisor: Nikita Borisov

Develop two differentially private methods to help share sensitive data. One method is based on sharing models and the other method is to share data by building a differentially private generative model.

HONOR and AWARDS

- **Siebel Scholar Class of 2020** ([News Post](#)) 2019.9
- **Travel Grant of \$800 from CCS Workshop PPML** 2019.9
- **Excellent Undergraduate in Shanghai** (Top 1%) 2018.6
- **National Scholarship**, Chinese Ministry of Education (Top 1%) 2015.9