

# Xiling Li

Tel: 206-228-1052 Email: [xiling.li@northwestern.edu](mailto:xiling.li@northwestern.edu) Location: Evanston, IL, USA  
Personal Website: <https://xilinggrantli.github.io> Google Scholar DBLP

---

RESEARCH INTERESTS Verifiable and Oblivious Query Evaluation, Privacy-Preserving Machine Learning, Secure Multiparty Computation, Zero Knowledge Proofs

EDUCATION **Ph.D. Computer Science**, Northwestern University Jun 2021 - Present  
• Advisor: Dr. Jennie Rogers  
**M.S. Computer Science**, University of Washington Dec 2020  
• Advisor: Dr. Martine De Cock  
• Thesis: *Privacy-Preserving Filter-based Feature Selection with Secure Multiparty Computation*  
**B.S. Computer Science**, University of California, San Diego Dec 2016

RESEARCH EXPERIENCE **Research Assistant**, Northwestern University Jun 2021 - Present  
• *ZKSQL* (VLDB 2023): Proposed the first work [2] on verifiable and efficient query evaluation with zero knowledge proofs for ad-hoc SQL queries in an operator-at-a-time fashion.  
• *RESCU-SQL* (VLDB 2023 demo): Proposed the first pragmatic OLAP system [1] with all-but-one malicious security for ad-hoc SQL queries.  
**Research Assistant**, University of Washington @PPML Group Sep 2019 - May 2021  
• UbiTtention 2020 Workshop (UbiComp-ISWC 2020): Proposed Mean-Split Gini Impurity algorithm (MS-GINI) [4] for Filter-based Feature Selection (FFS).  
• ICML 2021: Proposed the first general cryptographic protocol [3] for FFS based on honest majority secure multiparty computation with active security, and instantiated feature scoring protocol based on MS-GINI.

TEACHING EXPERIENCE **Guest Lecturer**  
• *Database Architecture and Query Evaluation*, COMP\_SCI 339, Northwestern University Fall 2023  
**Teaching Assistant**  
• *COMP\_SCI 339: Intro to Database Systems*, Northwestern University Spring 2023

INDUSTRIAL EXPERIENCE **Data Scientist**, IBM @Watson IoT Jan 2018 - Aug 2019  
• Developed a case-based reasoning system for disaster prevention based on knowledge graph.  
• Developed a defective product detection vision system based on object detection of different crucial parts of product and defective classification according to partial detection of the product.  
• Developed a real-time multi-face recognition system for storage monitoring.  
**Android Developer**, Shenzhen Das Intellitech Co.,Ltd @R&D Department Jul 2017 - Dec 2017  
• Developed Android app as the client side of intelligent building systems

SERVICES **Reviewer**: ICML 2021, 2022, 2023,2024; NeurIPS 2021, 2022, 2023; ICLR 2022, 2023, 2024

INVITED TALKS **Privacy + Machine Learning**, *Northwestern AI Journal Club*, Nov 2021.

TECHNICAL SKILLS C++, Python, Java, EMP-toolkit, Scikit-Learn, PyTorch, MP-SPDZ, AWS EC2, Ubuntu, Docker

OPEN SOURCE ARTIFACTS **Xiling Li**, Chenkai Weng, Yongxin Xu, Xiao Wang, Jennie Rogers. *ZKSQL: Verifiable and Efficient Query Evaluation with Zero-Knowledge Proofs*. <https://github.com/vaultdb/zksql>, Feb 2023.

- [1] **Xiling Li\***, Gefei Tan\*, Xiao Wang, Jennie Rogers, Soamar Homs. *RESCU-SQL: Oblivious Querying for the Zero Trust Cloud*. In Proceedings of the VLDB Endowment (PVLDB), Volume 16, No. 12, 4086-4089, 2023. DOI:[https://doi.org/ 10.14778/3611540.3611627](https://doi.org/10.14778/3611540.3611627).
- [2] **Xiling Li**, Chenkai Weng, Yongxin Xu, Xiao Wang, Jennie Rogers. *ZKSQL: Verifiable and Efficient Query Evaluation with Zero-Knowledge Proofs*. In Proceedings of the VLDB Endowment (PVLDB), Volume 16, No. 8, 1804-1816, 2023. DOI:<https://doi.org/10.14778/3594512.3594513>.
- [3] **Xiling Li**, Rafael Dowsley, Martine De Cock. *Privacy-Preserving Feature Selection with Secure Multiparty Computation*, In Proceedings of the 38th International Conference on Machine Learning, PMLR 139:6326-6336, 2021.
- [4] **Xiling Li**, Martine De Cock. *Cognitive load detection from wrist-band sensors*. In Adjunct Proceedings of the 2020 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2020 ACM International Symposium on Wearable Computers (UbiComp-ISWC '20). ACM, New York, NY, USA, 456–461. DOI: <https://doi.org/10.1145/3410530.3414428>