

Xiling Li

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| RESEARCH INTERESTS | Verifiable Query Evaluation, Secure Multiparty Computation, Zero Knowledge Proofs | |
| EDUCATION | Ph.D. Computer Science , Northwestern University • Advisor: Dr. Jennie Rogers | Jun 2021 - Present |
| | M.S. Computer Science , University of Washington • Advisor: Dr. Martine De Cock • Thesis: <i>Privacy-Preserving Filter-based Feature Selection with Secure Multiparty Computation</i> | Dec 2020 |
| | B.S. Computer Science , University of California, San Diego | Dec 2016 |
| RESEARCH EXPERIENCE | Research Assistant , Northwestern University • 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. | Jun 2021 - Present |
| | Research Assistant , University of Washington @PPML Group • 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. | Sep 2019 - May 2021 |
| INDUSTRIAL EXPERIENCE | Data Scientist , IBM @Watson IoT • Implemented a case-based reasoning system for disaster prevention based on knowledge graph. • Implemented 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. • Implemented a real-time multi-face recognition system for storage monitoring. | Jan 2018 - Aug 2019 |
| | Android Developer , Shenzhen Das Intellitech Co.,Ltd @R&D Department | Jul 2017 - Dec 2017 |
| TEACHING EXPERIENCE | Teaching Assistant , COMP_SCI 339: Intro to Database Systems, Northwestern University, Spring 2023 | |
| SERVICES | Reviewer : ICML 2021, 2022, 2023; 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 | |
| SELECTED PUBLICATIONS | <p>[1] Xiling Li*, Gefei Tan*, Xiao Wang, Jennie Rogers, Soamar Homs. <i>RESCU-SQL: Oblivious Querying for the Zero Trust Cloud</i>. In Proceedings of the VLDB Endowment (PVLDB), Volume 16, No. 12, 4086-4089, 2023. DOI:https://doi.org/10.14778/3611540.3611627.</p> <p>[2] Xiling Li, Chenkai Weng, Yongxin Xu, Xiao Wang, Jennie Rogers. <i>ZKSQL: Verifiable and Efficient Query Evaluation with Zero-Knowledge Proofs</i>. In Proceedings of the VLDB Endowment (PVLDB), Volume 16, No. 8, 1804-1816, 2023. DOI:https://doi.org/10.14778/3594512.3594513.</p> | |

- [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>