

Yuqing Li

University of Science and Technology of China

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Education

University of Science and Technology of China

09/2021-Present

School of Cyber Science and Technology

Bachelor of Information Security

Overall GPA: 3.48/4.3 Weighted average: 85.04

Core Courses

Quantum Physics: 90

Introduction to Quantum Information: 90

Computer Programming A: 91

Mathematical Analysis B1: 90

Algorithms Analysis and Design: 89

Electromagnetism A: 90

Research Interests

- Variational Quantum Algorithm for Machine Learning
- Quantum Differential Privacy
- Quantum Circuits Optimization

Publications

- [Yuqing Li, Yusheng Zhao, Xinyue Zhang, Hui Zhong, Miao Pan, Chi Zhang, *Differential Privacy Preserving Quantum Computing via Projection Operator Measurements* \(under review\).](#)

Research Experiences

Quantum Differential Privacy via Shot Noise

06/2023-12/2023

Instructor: Prof. Miao Pan, Electrical & Computer Engineering, University of Houston

- Conduct literature review on quantum differential privacy and variational quantum algorithm.
- Analyze and quantify the quantum privacy budget resulting from shot noise in quantum circuits with different types of noise or without noise.
- Perform corresponding experiments of quantum differential privacy on variational quantum circuits using *qiskit* and *pennylane*. For example, I trained a quantum classifier using the Iris dataset and calculate the privacy budget caused by shot noise for a small number of shots.

The Interpretability of Quantum Machine Learning

12/2023-present

Instructor: Wei Yang, School of Computer Sciences and Technology, USTC

- Engage in a comprehensive review of corresponding literature and provide a summary of the research findings.
- Attempt to improve the interpretability of quantum machine learning in other effective approaches at present.

Scholarships

Yan Jici Physics Science and Technology Scholarship

2022

Excellent Student Scholarship, Bronze Prize

2022

Skills

Programming Languages: C, C plus, Python, MATLAB, Latex, Shell, Markdown, Mathematica

Extra: SolidWorks, Cello, Violin