Zeqiao Zhou

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 GitHub Profile

EDUCATION

•**University of Science and Technology of China (USTC)**   *2021.09-2024.06*

Master in Information and Communication Engineering

– Master thesis: "Graph Algorithm based Resource optimization and Architecture Design of Quantum Circuits" supervised by Prof. Dacheng Tao and Prof. Xinmei Tian

•**University of Science and Technology of China (USTC)**   *2017.09-2021.06*

Bachelor in Computer Science and Technology,   GPA:3.54 (25%)

– I am graduated from Talent Program in Artificial Intelligence and School of the Gifted Young
– Bachelor thesis: "Fair Quantum Classifier" supervised by Prof. Dacheng Tao and Prof. Xinmei Tian

RESEARCH INTEREST

AI for Science and Quantum machine learning, specifically I focus on how to use classical machine learning techniques to facilitate the implementation of quantum algorithms (AI4Quantum), and how these quantum algorithms can eventually solve practical problems.

EMPLOYMENT EXPERIENCE

•**JD Explore Academy**   *2020.12-2022.04*

Quantum Algorithm Engineer Internship   Beijing
– I study how quantum computing can be utilized to design hybrid machine learning classifier for fairness.

RESEARCH PROJECTS

•**Quantum inspired Probabilistic Quantized Network**   *2024-now*

Working with Dr.Yuxuan Du@NTU

– Exploring the practical application of quantum computing in quantizing neural networks.

•**Deep learning for Quantum Sensing**   *2023-2024*

Worked with Dr.Yuxuan Du@JD and Dr.Xufei Yin@USTC

– Leverage deep learning model to design the optical quantum experiment setups for quantum sensing task in agnostic environment.

•**Quantum Approximate Optimization Algorithm for MaxCut**   *2021-2022*

Worked with Dr.Yuxuan Du@JD during my internship at JD.

– Designed a recursive QAOA scheme that can solve large MaxCut problems on small quantum devices.

SCHOLARSHIP & AWARDS

• Master Scholarship 2021-2023, USTC

• Outstanding Bachelor Graduate Award 2021, USTC

• Zhang Zongzhi Technology Scholarship 2018, USTC

• Undergraduate Freshman Scholarship 2017, USTC

PUBLICATIONS

• **Zeqiao Zhou**, Yuxuan Du, Xinmei Tian, and Dacheng Tao. "QAOA-in-QAOA: Solving Large-Scale MaxCut Problems on Small Quantum Machines" *Phys. Rev. Applied*, 19, 024027. [Link] (Published 9 Feb 2023)

MANUSCRIPTS

• **Zeqiao Zhou**, Yuxuan Du, Xu-Fei Yin, Shanshan Zhao, Xinmei Tian, Dacheng Tao. "Optical Quantum Sensing for Agnostic Environments via Deep Learning" [Link]

Academic Service

- I was invited as a reviewer for Quantum Machine Intelligence (QMI), IOP Science Machine Learning: Science and Technology (MLST), Science China Information Sciences (SCIS).

Skills

- Programming Language: Python, C/C++, Verilog

- Deep Learning Library: Pytorch, Pyg

- Quantum toolkit: Pennylane, Qiskit