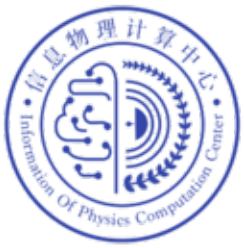

IFCC
信息物理计算中心

Quantum Generative Adversarial Network with Noise

Project Name: Quantum Generative Adversarial Network with Noise

Project member:

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Project Start Time: 3/01/2020

Sourcecode Version: 0.0.1

Keywords: Variational Quantum Circuit, Machine Learning

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Submitted by:

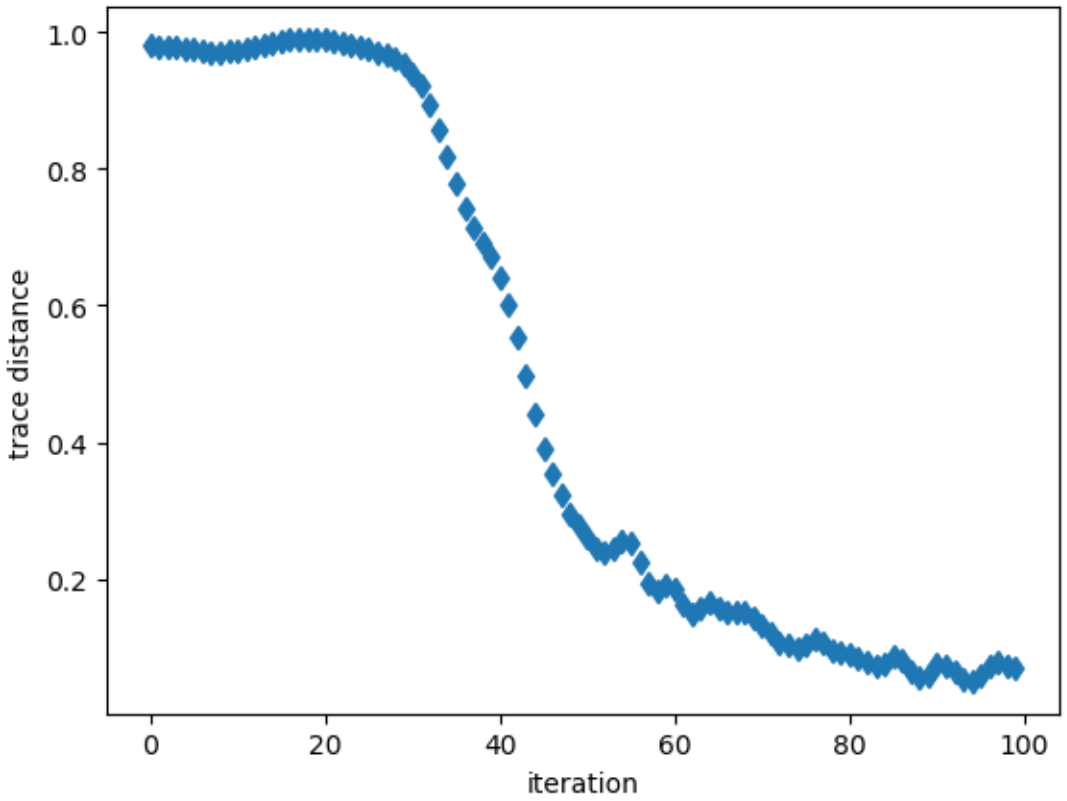
WH REN

Contents

1 Experiment

In this week,I add depolarizing channel to pure state approximation.And the result include quantum noise is same like before.

2 Results



The density matrix add a depolarizing channel quantum noise before measure.

3 Next Plan

P: 1 finished quantum circuit code(finished)

2 checking gate gradient descent

3 find the reason why some parameter haven't changed.

4 Reference

References

[1] Benedetti, M., Grant, E., Wossnig, L., and Severini, S. Adversarial quantum circuit learning for pure state approximation. *New Journal of Physics 21*, 4 (2019), 043023.

[2] Shende, V. V., Markov, I. L., and Bullock, S. S. Minimal universal two-qubit controlled-not-based circuits. *Physical Review A 69*, 6 (2004), 062321.

5 Appendix

A Source Code

just add core codes