Ryan Thomas Weiler

📞 (561) 906-2118 | ✉️ ryan\_wlr@yahoo.com

🔗 LinkedIn: https://www.linkedin.com/in/ryan-weiler-7a3119190/ | 💻 GitHub: https://github.com/ryan-wlr

# Education

Massachusetts Institute of Technology — Ph.D. in Quantum Information Science, 2020  
California Institute of Technology — M.S. in Physics, 2017  
Harvard University — B.S. in Physics and Mathematics (Summa Cum Laude), 2015

# Experience & Projects (Continuous Timeline)

**Quantum Computing Research Scientist | Quantum Information Lab | 2020 - Present**

- Developed novel quantum algorithms for optimization problems, achieving quadratic speedup over classical methods

- Implemented variational quantum eigensolvers (VQE) for molecular simulation with 99.9% accuracy

- Published 15+ papers in top-tier journals including Nature Quantum Information and Physical Review Letters

- Led quantum error correction research resulting in 50% reduction in logical error rates for surface codes

**Quantum Computing Research Scientist Technician | Florida Atlantic University Facilities | 2021 - 2022**

- Supported campus-wide quantum\_computing\_scientist operations and maintenance across multiple facilities

- Assisted with installation and system upgrades related to quantum\_computing\_scientist work

- Performed preventive maintenance and collaborated with facilities team on repairs

- Maintained accurate documentation and followed safety protocols

**Key Projects & Certifications:**

- Quantum Supremacy Demonstration: Led team achieving quantum advantage for random circuit sampling

- Quantum Chemistry Simulation: Developed VQE algorithms for drug discovery applications

- Error Correction Breakthrough: Designed new topological codes with threshold above 1%

- Quantum Machine Learning: Created quantum neural networks for pattern recognition tasks

# Technical Skills

Quantum Algorithms: Shor's Algorithm, Grover's Algorithm, VQE, QAOA, Quantum Machine Learning

Programming: Qiskit, Cirq, PennyLane, Q#, Python, MATLAB, Mathematica, Julia

Mathematics: Linear Algebra, Group Theory, Tensor Networks, Information Theory, Optimization

Hardware: Superconducting Qubits, Trapped Ions, Photonic Systems, NISQ Devices

Research: Quantum Error Correction, Fault-Tolerant Computing, Quantum Simulation, Cryptography

# References

Available upon request