Learning Resources for Quantum Computing

Online Resources

1. Qiskit Textbook -
   An interactive online textbook for an introduction to quantum computing and programming.
   https://qiskit.org/textbook/
2. Quantum Country -
   A very descriptive but limited introduction to the basics of quantum computing.
   https://quantum.country/
3. Quantum Algorithm Zoo -
   An assortment of important quantum algorithms, all in one place.
   https://quantumalgorithmzoo.org/

Text Books

4. Quantum Computing for Computer Scientists by Yanofsky and Mannucci -
   Basic introduction to QC from a more computer science perspective.
5. Introduction to Classical and Quantum Computing -
   Focuses on the basics of QC, tools like linear algebra and how to connect them.
   http://www.thomaswong.net/introduction-to-classical-and-quantum-computing-1e3p.pdf
6. Quantum Computation and Quantum Information by Neilson and Chuang -
   The Bible of Quantum Computing. Needs knowledge of some linear algebra.
7. An Introduction to Quantum Computing by Kaye, Laflamme and Mosca (Advanced) -
   Expected to be read after some familiarity with the basics of QC and linear algebra.

Video Resources

8. Qiskit YouTube Channel -
   https://www.youtube.com/c/qiskit
9. Ryan O'Donnell's Video Lectures on Quantum Computing -
   https://youtube.com/playlist?list=PLm3J0oaFux3YL5qLskC6xQ24JpMwOAeJz
10. Peter Wittek's Video Lectures on Quantum Machine Learning -
    https://www.youtube.com/playlist?list=PLmRxgFnCIhaMgvot-Xuym_hn69lmzIokg
11. Sevag Gharibian's Video Lectures on Introduction to Quantum Computing (Advanced) -
    https://youtube.com/playlist?list=PLZGjbQcY0aI4PB63hH_RnfnJSfNK1OojC

Some Fun Reads

12. Bits of Quantum -
    https://blog.qutech.nl/
13. Decodoku -
    https://decodoku.medium.com/
14. Shtetl Optimized -
    https://scottaaronson.blog/
15. Musty Thoughts -
    https://www.mustythoughts.com/