How to learn with this book

A practical reading rhythm, honest experiments and a little room to think.

5 min read Dr. Charith Jayasekara

Begin with a question

Try “What does measurement tell me?” rather than “How much can I read today?” Each lesson opens with a few outcomes. Use them to decide what you want to explain by the end.

Predict before you run

The experiments expose **exact model probabilities** and **sampled measurement counts** separately. Write down your expectation, choose the seed and shot count, then run. Changing the seed changes the simulated sample; it does not change the prepared quantum state.

Keep three kinds of evidence separate

- **Mathematical calculation:** what follows from the stated assumptions.
- **Ideal simulation:** a classical calculation of a small statevector, including amplitudes that hardware cannot freely expose.
- **Hardware observation:** noisy, finite measurements from a real device. This site does not execute hardware jobs.

Agreement with a small simulator is a useful correctness check. It does not establish scalable advantage on real hardware.

Use the notation in small steps

We write basis states as $|0\rangle$ and $|1\rangle$. A state of two qubits uses $|q_0 q_1\rangle$: **q0 is the leftmost, most significant bit**. This convention applies across the site’s simulators. Other tools may use different conventions.

Save what helps

Use **Mark as complete** at the end of a lesson. Progress is stored only in this browser. Clearing browser storage removes it. Chapter PDFs are generated from the same source as the web lesson and include static explanations of interactive experiments.

Learn without JavaScript

The reading content, equations, navigation and chapter PDFs are static. Browser JavaScript adds interactive controls, search and local progress. If scripts are disabled, the initial lab state and explanation remain visible; controls require JavaScript.

Build a small portfolio

For each practice task, keep your prediction, parameters, calculation, observed output and conclusion. Explain what the result supports and what it leaves uncertain. Use these self-study activities to build a record of your understanding.