Quantum Computing Tutorial
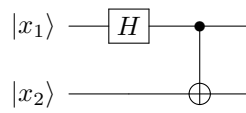
Quantum Circuits

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Task 1 Bell State - Simple
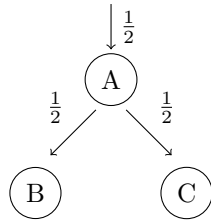
1. Implement the following circuit

$$|x_1\rangle \quad \boxed{H} \quad \bullet$$
$$|x_2\rangle \quad \oplus$$

2. Run the circuit for 10,000 shots with the Aer simulator

3. Collect the results and plot them in a histogram

Task 2 Quantum Pachinko - Medium

1. Implement a quantum circuit for the following Pachinko game

2. Simulate the circuit with 10,000 shots and Aer simulator

3. Repeat steps 1 and 2 for a Pachinko game with a depth of 10