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In quantum computing, fault tolerance isn't a single threshold—it depends on which errors you're dealing with.

➡️Depolarizing noise on data qubits? Threshold ~19%.
➡️Add measurement errors? Now it's ~3%.
➡️Add ancilla qubit errors and noise on gates? Now it's just ~1%.

We can also have
➡️Erasure errors
➡️Leakage errors
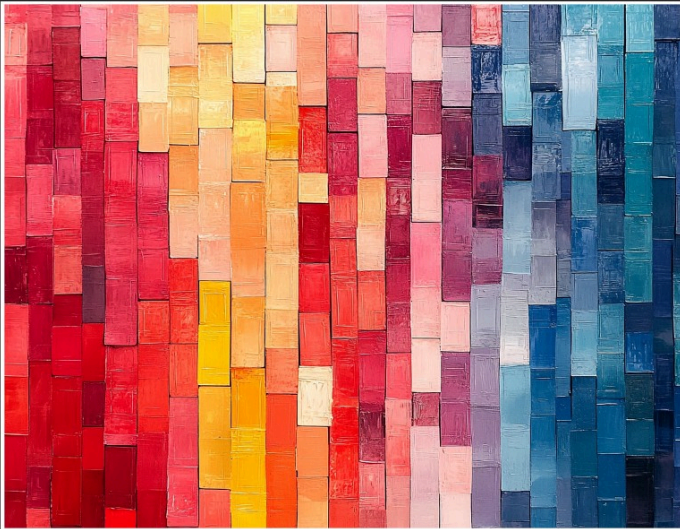➡️Fusion failure, scattering, charge noise and other errors for different platforms

The physics of your qubits determines the dominant errors—and that shapes which error correction codes will work.

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#quantumcomputing #faulttolerance #errorcorrection #qec #qcdesignlearninghub

Not all errors are equal

Different types of errors shape quantum error correction thresholds in different ways

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