Proposal

Title: **Instant Insanity Cube Puzzle**

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Description:

The Instant Insanity puzzle is a classic recreational mathematics problem involving four cubes. Each face of the four cubes is colored with one of four distinct colors (e.g., Red, Blue, Green, Yellow). The objective of the puzzle is to stack the four cubes in a column such that all four colors appear exactly once on each of the four vertical sides of the stack.

We will be looking into what quantum algorithms can be used to solve the Instant Insanity problem by encoding cube configurations and constraints into a quantum representation.

Implement a quantum algorithm to find the solution to the Instant Insanity puzzle based on your encoding and objective function. This may involve using techniques like Quantum Approximate Optimization Algorithm (QAOA), Variational Quantum Eigensolver (VQE), or other relevant quantum optimisation approaches.

Visualisation: https://instantinsanity.z20.web.core.windows.net/

Milestones:

1. Classical form of Instant Insanity Cube
    - By Oct 30, 2025
2. Encoding Scheme and devising a Hamiltonian function for Instant Insanity Cube
    - By Nov. 15, 2025
3. Quantom Algorithm Implementation and Stabilising
    - By Nov. 25, 2025