

Peer Review

Review of: "Hybrid Quantum Neural Networks with Amplitude Encoding: Advancing Recovery Rate Predictions"

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1. Independent researcher

The research article titled "**Hybrid Quantum Neural Networks with Amplitude Encoding: Advancing Recovery Rate Predictions**" has been reviewed. This is an engaging and timely topic, as the implementation of quantum solutions not only demonstrates their potential in enhancing recovery rate predictions but also establishes a workflow that could be adapted for use in other disciplines.

I appreciate the structured approach taken in this research. The clear separation of the main study and the additional supporting work in the appendix makes it easy to follow the progression of ideas and methodologies. This enhances the readability and logical flow of the paper.

However, there are a few areas that require further clarification and improvement to strengthen the manuscript. Below are specific recommendations:

Methodology Section

- Please provide the equations used for calculating **Root Mean Squared Error (RMSE)** and **Standard Deviation (SD)** within this section.

Results Section

1. Actual vs. Predicted Performance

- Although the RMSE values for the three models appear comparable, was there any **significant discrepancy between the actual and predicted values**? A visual representation, such as a **plot comparing actual vs. predicted values**, would be helpful in assessing model performance.

2. Forecastability Comparison

- Could you compare the **forecastability** of the recovery rate using the three models? Evaluating how consistent or inconsistent the predictions are across different models would add depth to the discussion.

3. Table 4: Additional Metrics

- While RMSE provides insight into model accuracy, including the **R-score (coefficient of determination)** for each model would provide a more comprehensive evaluation of their predictive performance. Please consider adding these values.

Appendix B

1. Correction in Qubit Labeling

- **Paragraph 1, Line 3:** The manuscript states, “*one with six qubits and another with...*”, yet **Figure B2** labels seven qubits. Please correct this inconsistency for clarity.

Declarations

Potential competing interests: No potential competing interests to declare.