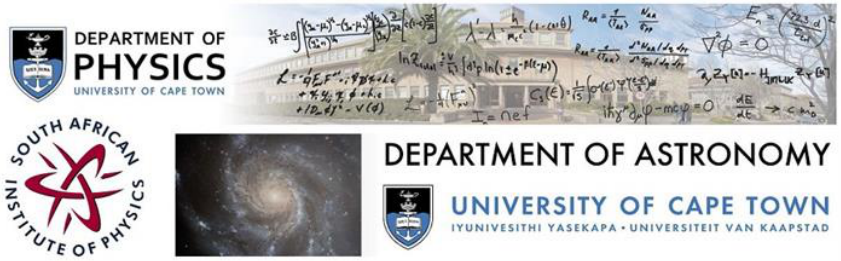

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Solar power prediction model using quantum machine learning algorithm

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Abstract content
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Classical machine learning is the intersection of artificial intelligence and statistics. It studies the algorithms that can be used to analyze data and also make predictions about the data. The quantum version of classical machine learning is Quantum Machine Learning (QML). As a sub-field of quantum computing, it uses quantum mechanical concepts such as superposition, entanglement and quantum adiabatic theorem to analyze data and make predictions about data. Currently, QML research has taken two directions. The first approach involves implementing the computationally expensive subroutines of classical machine learning algorithms on a quantum computer. The second approach concerns using classical machine learning algorithms on quantum information. In this paper, we propose a solar power prediction algorithm which implements quantum support vector algorithm. Simulation results underline the utility of this prediction model.

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