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Interactive Solar Electric Rickshaw

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As the world develops, it is inevitable that society has to adapt to the changes that occur. One of the sectors that is experiencing such developments is the transportation sector. As the global warming and climate change concerns increase, it is important to turn our attention to cleaner energies and create ways to ease the adaptation to these changes.

With that in mind, the scientific proposal of this thesis revolves around a fully solar electric rickshaw. The purpose of the implementation of solar photovoltaic panels on the electric rickshaw is to assist the vehicle operation and autonomy by charging the battery pack. Throughout this process, changes in the vehicle instrumentation will be carried out to optimize the interaction between the vehicle, the battery pack and the solar photovoltaic panels.

Apart from such optimization, multiple sensors and communication technologies will be integrated in order to create an interactive dashboard destined for the vehicle occupants. This dashboard will be mainly oriented towards an energy management system that will provide information on general details of the trip and on how the system of solar photovoltaic panels and battery pack translates to environmental and economical contributions.

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