

# **IoT-Based Portable Electric Motor Production System for Wheelchairs in Collaboration with CV PCB Express**

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## **ABSTRACT**

The use of electric wheelchairs in Indonesia is still very rare, because the price of electric wheelchairs is too expensive so it is difficult to reach by people with disabilities. On the basis of these problems, an IoT-Based Portable Electric Wheelchair is needed, which is a wheelchair with an electric motor drive and can be driven Smart Technology-based joystick with an Android application on a smartphone. The purpose of the research is to produce IoT-based electric motors in wheelchairs, so that they can be utilized by people with disabilities, for the ease and comfort of mobility of people with disabilities. The research method used is the Research and Development method. This method is used to modify various existing wheelchair manufacturing projects into Electric Wheelchair Portable IoT-Based. Based on the results of literature review and discussion with wheelchair users, it is known that to provide IoT-Based Portable Electric Motors in wheelchairs, there needs to be an understanding between providers and users. Each prospective user will go through a process of inspection, measurement and interview with the electric motor provider to ensure that the components provided are in accordance with the special circumstances, activities, and environment around the user. The next thing done by component providers is to do fittings that aim to ensure that all components are in accordance with the needs of potential users which will then be assembled and tested. The evaluation process of installed components will be carried out during the trial activities.

Kata Kunci: *Portable Electric Motor, Wheelchair*