

## **Ergonomic Design of Back Pad and Seat Health Electric Wheelchair Portable IoT-Based**

**by Jaka Sunardi, Angga Damayanto, Yosep Efendi, Khusni Syauqi, Ari Iswanto, Teguh Toni Prasetyo**

### **ABSTRACT**

Wheelchairs are a basic need for people with disabilities, especially people with physical disabilities. Even though conventional wheelchairs have helped the mobility of persons with disabilities, it is within short reach due to physical fatigue and health problems due to sitting in a wheelchair for too long. If the wheelchair is not suitable or uncomfortable, the body will be injured, so mobility becomes limited, environmental exploration is also limited, and the adaptation process becomes limited. Therefore, it is essential to develop backrest and seat features for Health Electric Wheelchair Portable IoT-Based wheelchairs for the convenience and comfort of the mobility of persons with disabilities. The development of this pad uses the Research & Development method. The development of this wheelchair aims to reduce the negative impact of prolonged immobilization on persons with physical disabilities. The development of the wheelchair pays attention to the ergonomic design by developing the features of the backrest pad and seat for the Health Electric Wheelchair Portable IoT-Based. Wheelchairs provide safety and comfort in using a wheelchair, mainly to prevent the harmful effects of immobilization on persons with physical disabilities.

*Kata Kunci: Pad, Wheel Chair*