

Design and Fabrication of Offroad Electric Wheelchair

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Abstract: *This paper presents the design, development, and testing of an innovative Off-Road Electric Wheelchair (OREW) aimed at addressing the limitations of conventional electric wheelchairs that primarily cater to indoor use and paved surfaces. By focusing on off-road capabilities, the OREW project seeks to enhance the quality of life for individuals with mobility impairments, enabling them to explore outdoor environments and participate in various activities. The OREW has the potential to promote social inclusion, provide opportunities for recreation, exercise, and exploration, and significantly contribute to overcoming accessibility barriers faced by people with disabilities.*

Keywords: Off-road mobility, Electric wheelchair design, Fabrication techniques, Terrain adaptation, Accessibility technology