

# **NECK MOVEMENT OPERATED WHEEL CHAIR FOR QUADRIPLÉGIA**

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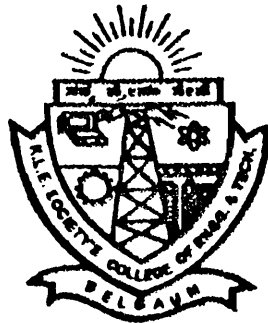
**A Project Report  
submitted in partial fulfillment of the requirements  
for the award of the Degree of Bachelor of  
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of the Visvesvaraya Technological University, Belgaum**

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## ***ABSTRACT***

*Even though we are in the twenty-first century and the technology is kissing our feet there are many unfortunate ones who are physically and mentally challenged and for some reason the modern medicine seems to be of no effect to them and they remain on the mercy of the traditional and conventional ways of handling such handicaps.*

*For some people who are mobility impaired, the safe movement is beyond their capabilities. They need to be dependent on others to make them move and take care of them. This is especially true for those individuals who have complete or partial mobility loss. Typically they use a hand driven chair, which needs to be powered, by the human hand. Thus the movement is restricted and becomes painful and cumbersome for the rider suffering from Quadriplegia(Paralysis of Four Limbs).Quadriplegia is caused by damage to the brain or to the spinal cord at a high level (e.g. the cervical spine).Quadriplegia is also called Tetraplegia.*

*The aim of this project is to implement an interesting application using self-propelled Wheel chair that can be moved along all directions based on the movements of the neck by using a accelerometer or sensor mechanism and is joystick controlled. It relies on micro-controller based systems (89c51) for navigation, operation and control. An accelerometer is an instrument used for measuring acceleration, detecting and measuring vibrations, or for measuring acceleration due to gravity. The Joystick has the remote connectivity.*