FINAL YEAR PROJECT REPORT

EXO-SKELETON

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EXO- SKELETON

ABSTRACT

Metabolic educations have shown that there is a metabolic cost related with carrying a load. Further studies have shown that by applying forward propulsive forces a person can walk with a summary metabolic rate. Previous work on exoskeleton design has not considered the passive dynamics of walking and has focused on fully actuated systems that are inefficient and heavy. In this project, an under-actuated exoskeleton is presented that runs parallel to the human leg.

The exoskeleton module design is created on the kinematics and kinetics of human walking. The object of this project is to help disable or aged person who faces difficulty in moving and walking. It is basically a suit which performs as an outer Skelton for a human being who is disabled or has difficulty to walk balance, sit, stand from chair, stairs, etc. like the most aged person. These components will be programmed and works on Arduino. Movements are controlled though Arduino.

An exoskeleton suit has an enormous potential which can be used to support people with temporary or permanent disabilities.

The exoskeleton can uplift 85kg weight of a person.

The lives of paralyzed and physically disabled people can be changing through exoskeleton by giving them independence of directorial their own movement.

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