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(57) Abstract :
ABSTRACT Due to stroke, highest number of paralysed populations are enforced to be at the mercy of relatives and caregivers to engage in their daily routines. To facilitate post-stroke rehabilitation, diverse assistive technologies have been developed to actuate the impaired body parts of the patients. In Many of these devices, the subjects neither can regulate the device nor can get stature of the exoskeleton. The latest paradigm in assistive technology is the integration of BCI technology to facilitate the rehabilitation.But, majority of the commercially available devices reports inaccuracy and lack of continuous control. Additionally, existent assistive technologies like exoskeletons create the hardship of lifting the weight and also induce mental fatigue and frustration. The designed system confront these situations utilizing a Deep learning Brain controlled Assistive Technology (DLBCAT),that regulates exoskeleton actions in synchronization with subjects desire for movement . DLBCAT employs a responsive design that can be altered based on the scale of impairment. The exoskeleton is casted analogous to human body anatomy, which makes it an effortless wearable.The rehabilitation process is dehumanized by implementing Artificial Muscle Intelligence (AMI) algorithm. AMI algorithm merges user thoughts with artificial stimulation to enhance the user experience.EEG sensors record the subject’s cortical activity, which are reconstructed into hand stimulation using processor and Nerve Stimulation device. The device administers communication assistance through gesture perception method. The invention is unique because restoration of movement and communication service is integrated in one device itself, whereas the existing systems employs multiple devices for this purpose. Non-invasive muscle activation mechanism to regulate upper limb movements, which can substitute hand exoskeleton model is also presented in this invention. The real time device testing is carried out on 4 healthy subjects and 2 paralyzed patients. The deep learning model employed in the system minimizes the caregiver interventions and enhances the system classification accuracy.

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डिजाइन के पंजीकरण का प्रमाणपत्र
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प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो **IOT BASED CAMERA FOR HEALTHCARE MANAGEMENT** से संबंधित है, का पंजीकरण, श्रेणी **16-01** में 1.Dr. V. Suresh Kumar 2. Dr.Vince Paul 3.Dr. T.I. Manish के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

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