

AI-ASSISTANCE



Causes of Physical Disability in Hands and Legs

- Some are born with limb differences due to genetic conditions or complications during pregnancy.
- Road accidents, workplace injuries, or falls can lead to amputation or paralysis.
- Conditions like polio, cerebral palsy, muscular dystrophy, or stroke can cause mobility impairments.
- Some people lose their limbs due to infections, diabetes, or cancer.
- Conditions affecting the nervous system, such as spinal cord injuries, can lead to loss of function in limbs.

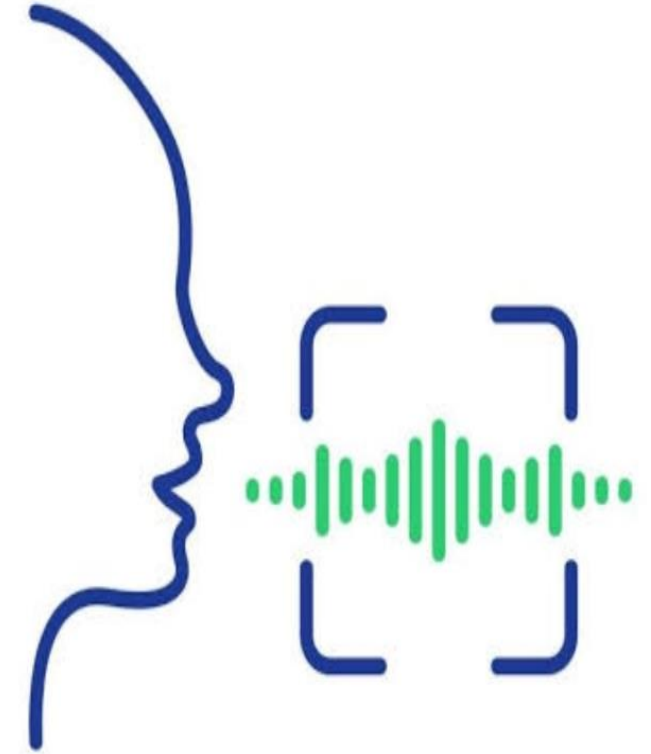


How They Feel

- **Emotional Impact:** Many experience frustration, sadness, or even depression, especially if their disability is acquired suddenly.
- **Physical Challenges:** Everyday tasks like walking, holding objects, or even dressing up can become difficult.
- **Social Impact:** Some face discrimination, lack of accessibility, and societal stigma.
- **Adaptation & Strength:** Many learn to adapt using assistive technologies like prosthetics, wheelchairs, or voice-controlled devices. Some become stronger, motivated, and even excel in sports, arts, or careers.



- This paper presents an innovative approach to developing artificially working hands and legs for individuals with physical disabilities, incorporating with voice recognition technologies for enhanced user autonomy and mobility.
- Smart technologies that allow users to operate their artificial limbs through intuitive voice commands with bluetooth recognition . Voice recognition enables seamless, hands-free control with bluetooth .
- This combination of technologies ensures a more natural and adaptive experience for users, improving their ability to perform daily tasks such as eating, walking, and interacting with their environment.



The paper delves into the engineering design, technical challenges, and the human-computer interaction aspects of such systems, emphasizing their potential to enhance the quality of life and independence for people with mobility impairments.

For example, if the user gave a command to walk forward by bluetooth then it will ask permission to walk front of the user said yes means then the artificial legs will work like that, it only recognises the user voice and if the command given to wrist the hand and to give thumbs up the command given by user in bluetooth device then it will recognise the voice of the user accurately and after confirmation it will work further.



There will be a sensor in artificial legs which detects the objects in front of them it may be a ball or wall whatever it is it will detect it and it gives command for the user by bluetooth device that there is a device you can't move further then after the command given by the user either to walk right or to left side after confirmation it will work

The artificial fingers are connected to servo motors. When a command like “Open” is received, the servos rotate, pulling the fingers open. When “Close” is received, the servos rotate back, closing the fingers.



It would give users a strong sense of independence, allowing them to move freely and perform daily tasks with ease. The Bluetooth voice command system enhances convenience, enabling hands-free control, while the sensor-based object detection ensures safety by preventing obstacles. Users would likely feel more confident in social and professional environments, as the device helps restore mobility.

Comfort and adaptability are key factors, ensuring a seamless experience with minimal strain. While some may initially feel hesitant or skeptical, intuitive design and ease of use would help them quickly adapt.



Excitement and curiosity about the advanced technology could make the experience even more engaging.

The device fosters emotional well-being, reduces dependency on others, enhances mobility, and empowers users to lead a more active, fulfilling life.

Overall, users would feel grateful for a product that improves their quality of life, giving them hope for further advancements in prosthetics. The combination of technology, safety, and usability would make their daily routines more comfortable and empowering.



THANK YOU