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Department of Computer Science & Engineering

ParaConnect

IoT-Enabled Healthcare System for Paralysis Patients and Bedridden Elders

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CONTENTS

Introduction

ParaConnect represents a groundbreaking initiative in the realm of healthcare, aiming to enhance the quality of life for paralysis patients and bedridden elders through the integration of Internet of Things (IoT) technology.

This innovative healthcare system leverages the power of connectivity to address the unique challenges faced by individuals coping with paralysis and those confined to their beds due to age-related issues. By seamlessly merging healthcare with IoT, ParaConnect seeks to provide a comprehensive and adaptive solution that not only monitors but actively contributes to the well-being of its users.

ParaConnect creates a future where healthcare transcends traditional boundaries. The integration of IoT empowers healthcare professionals, caregivers, and patients alike by fostering real-time communication, data-driven insights, and responsive care.

Abstract

ParaConnect is a special healthcare system designed for people who are affected with paralysis or for the bedridden elders who are confined to bed by sickness or old age. This project uses smart technology like sensors and wearable gadgets that give message to the persons who take care of the patients.

The main goal of this project is to help the patients by keeping an eye on their daily needs, like water, food and other necessary things. This device lets them easily communicate to their caregivers and doctors. This device is easy to use and can get the things done in time. This device is a groundbreaking leap in healthcare technology, offering a comprehensive, accessible, and responsive support system to empower and uplift those with limited mobility.

The system incorporates a variety of IoT components, including sensors, wearable devices, batteries, and a centralized control hub, interconnected through a circuit. ParaConnect is a helpful friend, always there to watch over and support these individuals, making their lives easier and safer

Problem Statement

Paralysis patients and bedridden elders often encounter significant challenges in managing their health and well-being, exhausted by limitations in mobility and accessibility to timely healthcare. Traditional healthcare systems may struggle to address the unique needs of this demographic due to a lack of continuous monitoring and proactive intervention. The absence of a structured solution leads to a gap in personalized care, hindering the overall quality of life for these individuals.

ParaConnect aims to bridge this gap by addressing the limitations of current healthcare models, introducing an IoT-enabled system that offers real-time monitoring and personalized interventions to enhance the health and independence of paralysis patients and bedridden elders.

Objectives

Develop a system to detect Wrist Movement: Develop a system that reacts to the wrist movement made by the paralysis patient or bed-ridden elders to their requirement and displays the output to the LCD screen.

Proactive Healthcare Interactions: Develop a system that displays the needs of the paralysis patient and bed-ridden elders on the LCD screen.

Quick Responses: Swift responses are made by the helpers as a reaction was made by the patient a sound shall be produced which acts as a notification to address the needs of the patient.

Hardware Components

- **Microcontroller :** Arduino Uno / ESP 32
- **Sensor :** MPU6050 (accelerometer/gyro)
- **Display :** 16x2 LCD
- **Power Supply :** 9v batteries
- **Wi-Fi /Bluetooth Module**
- **Bread Board**
- **Resistors**
- **Jumper Wires**

THANK YOU