

CHAPTER 1

Introduction

1.2 Background

Falling on the older is something that each old individual doesn't need. Yet, it can't be rejected that this is a debacle or an absence of oversight in the old. In the event that there is legitimate management and brief activity in taking care of falls, they can be forestalled or decreased

Along these lines, we join two sensors, in particular the accelerometer and spinner sensors, what capacity to get information from the article, then, at that point cycle it whether the information from x, y, z that is gotten surpasses the predetermined upper and lower edges. In the event that it meets the conditions, there is a bell that will sound and give a sign when the old individual falls, which we trust there will be first precautionary measures or help so the old's condition doesn't deteriorate.

Eventually, the exceptionally lethal result of falling is demise. To diminish and forestall this demise rate, fall discovery frameworks in the older are vital and can't be thought of. The arrangement we can offer is to keep the old from falling, or in the event that they fall they will promptly be helped. So the instrument we made can decrease the death rate at the danger of falling in the older.

1.3 Problem Formulation

1. How does the accelerometer sensor work?
2. How does the gyroscope sensor work?
3. How do you distinguish between normal activities in elderly people and when they fall?

1.4 Scope

This project uses Arduino IDE version 1.8.13 for the program, Arduino mpu-6050 for the accelerometer and gyroscope sensor, Arduino Nano for the interface with computer, and Atmega 328 as microcontroller. The reason for choosing to use Arduino is because it makes it easier and allows detecting falls in the elderly. In addition, it is also practical in making programs and circuits. and the price is affordable. So I also decided on designing this project to be a belt because it is quite easy and simple to apply to the elderly. Also more effective when used by the elderly when doing various activities.

1.5 Objective

Creating a fall detection system for the elderly, by comparing the normal activities of the elderly and the activities of the elderly when they fall. To be able to reduce and prevent the very fatal risk of falling at a very vulnerable age and can reduce mortality in the elderly due to fall factors.