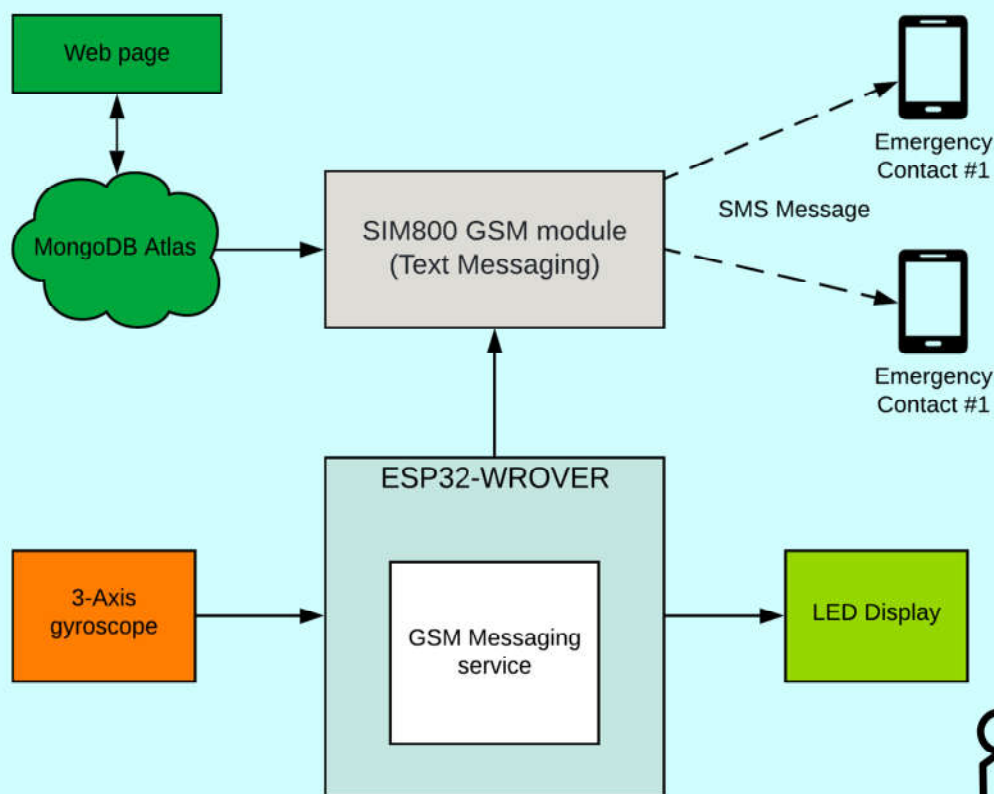


# Feather Fall

## Fall detection for the elderly

Falling is one of the most serious life-threatening events that can occur, as approximately one-third to one-half of the population aged 65 and over (mostly aging care centers residents) experience falls on a yearly basis and half of these elderly do fall repeatedly<sup>[1]</sup>. This device the Feather fall seeks to mitigate the harm caused to the elderly after a fall by notifying emergency services and/or relatives and close friends or neighbors in the event that a fall has occurred.



### The device

is centred around the ESP-32 WROVER. An accelerometer connected to the ESP can detect free-fall velocity and when detected, this issues an interrupt to the ESP. The ESP then monitors the orientation of the device and the current speed to determine if a fall has occurred. If it is determined that a fall has happened, a notification is sent to the user and if cancelled the event is simply logged. Otherwise, a notification is sent to subscribed users.

### The Website

So that relevant people are contacted in the event of a fall, users can register on the Feather Fall web-page with a name, email and phone numbers to receive notification in the event of an accident. the 'Contacts' page allows users that have registered, add new users as well as remove numbers that are no longer needed. Once a contact has been added on the web-page, it is stored in a database and is accessible to the Feather Fall device remotely

The screenshot shows the 'Contacts List' page of the Feather Fall website. It features a sidebar with navigation links: Feather Fall, Tomasz Klebek, Dashboard, and Contacts. The main content area displays a table with contact information and a 'Remove' button for each entry.

Name	Number	Remove
Alejandro Sellers	945-778-6510	Remove
Almira Warratt	325-419-0576	Remove
Anabal Firminger	913-420-2416	Remove
Arluene Test	828-338-4887	Remove
Bary Schmuhl	429-952-8198	Remove
Benni Squirrel	472-898-1206	Remove
Bert Grimsditch	731-584-0108	Remove

