# Pothole Detection

IoT Project Presentation

# Team Members

- **Jash Gandhi**
- **Rudram Vyas**
- **Shubham Patel**

# Introduction

Hitting a pothole can be jarring. It can cause damage to the tires, rim, suspension and much more. According to a study by the AAA club Pothole damage costs US Drivers almost 3 Billion dollars every year. Imagine how much money and damage could we save with a mobile application that tells the car driver beforehand that there's a pothole further ahead of the road? Well that's what we plan to do.

# Devices

For this project, we plan on using the smartphone built-in sensors such as Accelerometer and Gyroscope as well as the smartphone camera to capture images.

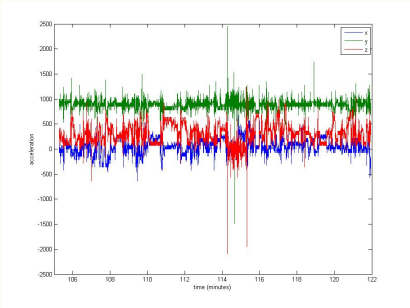
We will then using data from these sensors and Images from camera, create a machine learning model which will help us predict potholes every time we encounter one.

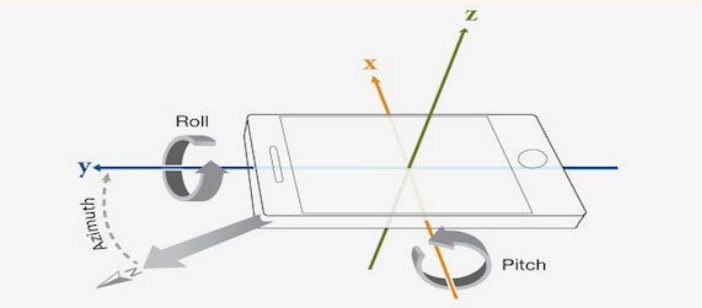
# Techniques used

**Hardware Integration**

We are going to use the smartphone sensors to collect the data required for the project, we will store the data in a csv file.

We also use the photos from the smartphone camera to create an elaborate dataset.



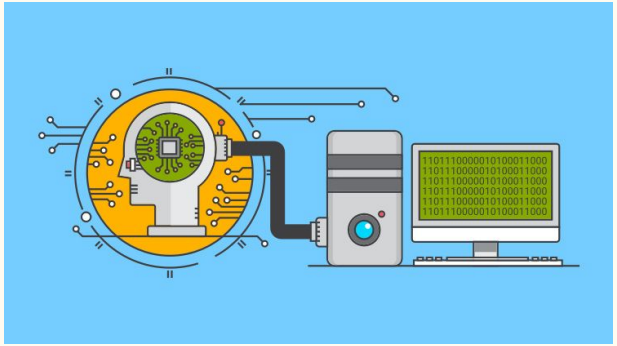


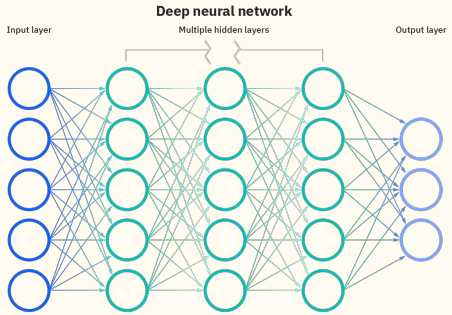

# Techniques used

**Machine Learning**

We use the dataset created by the sensors data and divide it into testing and training subsets.

We use the training set to create and train the model to detect potholes and then use the testing dataset to check accuracy of the model.





# Final demo plan

For the final demo we plan on showing the potholes we detected around this area in a google maps view