Abstract

Project code « EBED3 **»**

Project Filed « Embedded Systems **»**

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Project Title « Bumps detector **»**

Description Of Problem Title

Cars and drivers are exposed to many problems due to the inability to see bumps in time, which leads to car damage and serious accidents. This research aims to develop a device that can detect bumps and warn drivers in a timely manner to avoid accidents.

Previous Research Results

1- Nearly 1.19 million people die annually due to traffic accidents.

2- Traffic accident injuries are the main cause of death among children and youth between the ages of 5 and 29 years.

3- Traffic accidents cost most countries 3% of their gross domestic product.

4- Males are approximately three times more likely to be involved in fatal traffic accidents than females.

5- 28% of deaths resulting from traffic accidents occur in the Southeast Asia region, 25% in the Western Pacific region, and 19% in the African region.

6- A 1% increase in average speed increases the risk of a fatal collision by 4% and a serious collision by 3%.

The premise / Purpose of The Design

1- Reducing car accidents

2- Design an inexpensive device

3- Save lives

4- Preserving public property

Future Plans

1- Improving the accuracy of the sensors used

2- Developing a system to warn drivers via a mobile phone application

3- Conduct additional tests in different conditions to ensure the effectiveness of the device

4- Coordination with the Traffic Department

5- Providing the device with artificial intelligence

6- Find an investor to adopt the project

Research Sources

1- Arduino documentation from official site

2- World Health Organization

3- Atletica Safety Fundacion

4- Harvard University

5- Wikipedia