**Driver State Monitoring**

**For Road Safety**

**By: Jhonel M. Marquez**

**Introduction**

Driver errors are a major contributor to road accidents. Texting, calling, surfing the internet, and navigating through mobile phones – each of these can be a cause of distraction for drivers. Fatigue and alcohol intoxication of drivers make them unable to adequately perceive, react and respond to situations on the road. These distractions and conditions of the driver can lead to road accidents.

Getting into a car accident can lead to several unwanted consequences, including permanent injuries, or even death. This issue makes the driver state, mentally and physically, have a critical impact in road safety. This is why monitoring the state of drivers help reduce road accidents.

The world has been rapidly breaking boundaries in technology and is still developing exponentially. In our current digital age, the Fourth Industrial Revolution (4IR) has introduced us to several technological advances such as Artificial Intelligence and the Internet of Things (IoT).

Artificial Intelligence has seen a rapid implementation in several sectors, including the automotive industry. Majority of the companies in automotive industry are using AI in their car-manufacturing processes. Car companies and some other tech companies are in a competition to develop the best self-driving technology.

The application of Artificial Intelligence in the automotive industry is not limited to autonomous driving. AI also helps with keeping us safe and connected. From car manufacturing processes to self-driving cars, these revolutionary concepts are made possible because of the use of AI and IoT.

Though AI technology plays a huge part on making self-driving cars possible, it would not be possible with AI technology alone. Internet of Things (IoT) plays a huge role in autonomous vehicles. IoT technology is responsible for monitoring the driver state inside the car and gathering information from the outside environment of the car in order to drive safely.

The combination of IoT and AI technologies will help reduce road accidents by monitoring the driver state. The idea is to forcefully shift the car from manual to autonomous when the car sensed that the driver is distracted or in no condition to drive, thus avoiding possible accidents. When the driver is back in good condition and focused, the car will shift from autonomous to manual, letting the driver to resume control over the car.