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**MANUKAU INSTITUTE OF TECHNOLOGY**

Faculty of Business and Information Technology

**PROJECT PROPOSAL**

**Driver Safety & Drowsiness Detection System**

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| **Module** | : | **Hot Topic in Software** |
| **Supervisor** | : | **Fadi Fayez** |
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# 1. INTRODUCTION

## 1.1 Problem Description

Automobile has become a major part in our lives. They are used for transportation of people, items and any many other from one place to another. Whatever the automobile type (car, van, bike etc.) is being used for transportation, the safety should be a number one priority. While transporting people or any other item we should think about the safety of the passengers of the vehicle, public and private and public properties. According to Ministry of Transport, New Zealand (2018) number of road deaths has been increased from 284 to 393 within the period of 2011 to 2018. They also state that the number of reported injuries in transportation has amplified from 11,000 to 13,000 within a period of 5 years until 2017. Above statistics confirms that there should be a lot of improvements in the automobile and transportation industry for safety and the wellbeing of humans as well as the safety of private and public property.

There are various factors which contributes to road injuries and deaths. Some of them are lost control of the vehicle, speeding, alcohol, driver drowsiness, weather conditions, vehicle conditions and so on (Ministry of Transport New Zealand, 2018). Most of the time drivers do not care about the state of themselves prior to driving a vehicle. Even though the driver is tired, sleepy or has consumed alcohol he/she tries to drive a vehicle without any anxiety. As a result, it causes road accidents, injuries, loss of lives and damage to property. There aren’t many systems which could predict the conditions of the driver prior to a trivial incident which could assist the driver immensely. Therefore, this project mainly focuses on the driver drowsiness and how it can be identified using computer vision and facial features in order to provide necessary alerts to the driver when required as a warning, so that the driver can decide whether to continue driving or not and take a proactive approach to such incidents rather than a reactive approach.

## 1.2 Solution & Research Question

## 1.3 Scope

## 1.4 Measurable Organizational Value

# 2. Literature Review

## 2.1 Overview

## 2.2 Existing Systems

# REFERENCES

https://www.transport.govt.nz/resources/road-safety-resources/roadcrashstatistics/monthlyoverviewofcrashstatistics/monthly-road-crash-statistics-update-march-2018/