

**INFORMATICS INSTITUTE OF TECHNOLOGY**

In collaboration with

**UNIVERSITY OF WESTMINSTER UK**

**SafeDrive — Real Time Driver Warning System based on  
Historical Data**

A dissertation by

**Arshardh Ifthikar (2014263)**

Supervised by

**Mr. Saman Hettiarachchi**

Submitted in partial fulfillment of the requirements for the

BEng. (Hons) Software Engineering degree

Department of Computing

© The copyright for this project and all its associated products resides with  
Informatics Institute of Technology

## **Abstract**

Road traffic accidents is a severe issue which causes great distress and destroys lives of many individuals. In spite of different attempts to solve this problem, it still resides as a major cause of death. This thesis proposes a system, to analyse historical accident data and subsequently identify accident-prone areas and their relevant causes via clustering accident location coordinates. This system, once developed, can be used to warn drivers of accident prone locations and their causes. The users also get the chance to contribute by reporting and reviewing unsafe locations.

In order to achieve this, a system is built, following proper research, requirement elicitation, design, implementation and evaluation.

### **Subject Descriptors:**

Information Systems ~ Information systems applications ~ Data Mining ~ **Clustering**

Information Systems ~ World Wide Web ~ Web services ~ **RESTful web services**

### **Key Words:**

Data Mining, Road Traffic Accidents, Clustering Algorithms, Global Positioning System, Autonomous automobiles