Sample Masters Thesis Editing

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Abstract

Because of tThe scenery on expressways is really changelesscan become monotonous and, letting the drivers can easily get tired. And becauseSince speed limits are there is restriction of lower speed higher on expressways we must obey, so the speed is higher than usual than on other roads, because of the high speed that the driver's field of driver's view is getting smaller, and this can allow so let dangerous driving events to occur more easily happen. In order to reduce the incidence of dangerous driving events, this paper proposes a system which uses relational maps to that can predict that any the occurrence of dangerous driving events that could happen, according to three factors: driver behavior, of driver's factor, the nearby vehicles factor and the roadway itself factor. WAnd warning the driver when the dangerous driving events might happen occur should will , achieveing the goal that of reducing the incidence of dangerous driving events.

In order to compose the an accurate driving relational map, the system shouldrequires the get input of these three factors of driver behavior, of drivers factor, the nearby vehicles and factor and the roadway factors. T, this map represents a driving event, and theis map can ould continue to grow up as the time progressesgoing. At first, the system will match these relational maps against pre-existing , there are

~~many~~ dangerous driving relational maps in the database, ~~the system will do matching process as the syst~~as it ~~em~~ composes the ~~driving relational~~ map. If a driving relational map is very similar to one of the dangerous driving relational maps ~~and the driving relational map are very similar~~, ~~meaning~~then ~~the~~ a dangerous driving event might ~~happen~~ occur in the future, and ~~so~~ thus the system ~~should~~ will warn the driver in order to avoid dangerous driving events ~~the dangerous driving event to happen~~. If ~~one of the~~a dangerous driving event ~~s~~ happens …

Comment [SM1]: CHECK:. "Happen in the future" sounds like it could be in a fairly distant time to come, rather than something urgent. I'd suggest writing instead something like "…dangerous driving event is imminent, so the system …." or (to be less dramatic) "could be about to occur, so the system …."

Chapter 1

Introduction

The development of active driver assistance systems (ADAS), which is a derivative form of an intelligent assistance systems, has been a popular research topic in recent times. An ADAS can prevent traffic accidents by warning drivers to pay attention to dangerous situations. An ADAS has four components, as follows:

(1) Detection component: The detection subsystems included in this component are used to collect data outside the vehicle. The subsystems work independently of each other and output the detection results to the analysis components.

(2) Coordination component: A coordination subsystem is able to coordinate all detection subsystems, including assigning operation priority and recording their operation process.

(3) Analysis component: The analysis component includes a driving event analysis subsystem which can analyze the data coming from the detection components and decide which situations drivers are in, by the use of decision making techniques.

(4) Prediction component: A prediction subsystem plays an important role in an ADAS. It can predict dangerous situations in advance. Since prediction results can be verified after the situations occur, we can design a learning strategy for the prediction subsystem to improve its performance.

Comment [SM2]: Check. Are the words "active-driver" usually hyphenated? If so, this will need to be changed throughout the document.

Chapter 2

The Architecture of this System

2.1 The Purpose of this System

There are allMany typeskinds of driving factors might happen be involved on expressways. These can be , we could induct driving factorsallocated to three main categories:, the driver behavior, of drivers factor, the nearby vehicles factor and the roadway factors. We canould compose a driving relational map if we regard each driving factor as a node and add the conditions of the sequence of each driving factor. So tThe driving relational map will represents a driving event and records the sequence of each driving factor. The purpose of this such a system is to predict whether dangerous driving events willould happen or not, baseding on the driving relational map.

The database will first become populatedinstall with dangerous driving relational maps at first, when the system wants and, to predict dangerous driving events, ,; it will then than matching them against driving relational maps with each of the dangerous driving relational maps in the database. If the similarity between two relational maps is higher than a certain threshold, meaning then a that the similar dangerous case might happen in the futurebe imminent, s. So the system can thenould warn the driver, thus reducing the likelihood to achieve the goal that of reducing the incidence of a dangerous driving events.

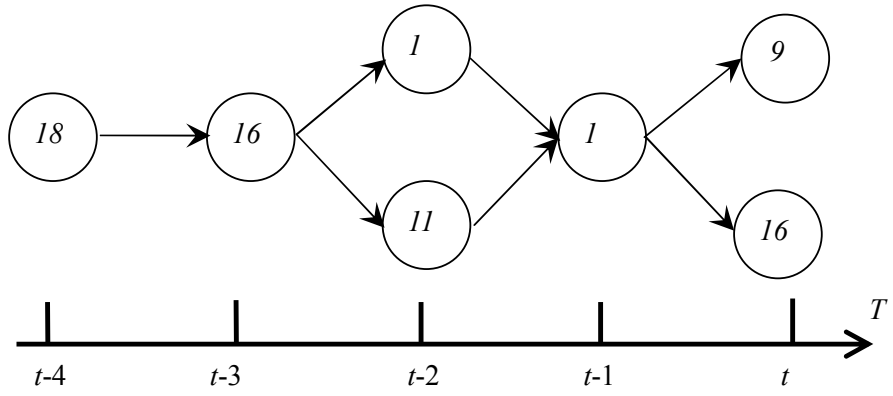
Chapter 3

Weighted Driving Relational Maps

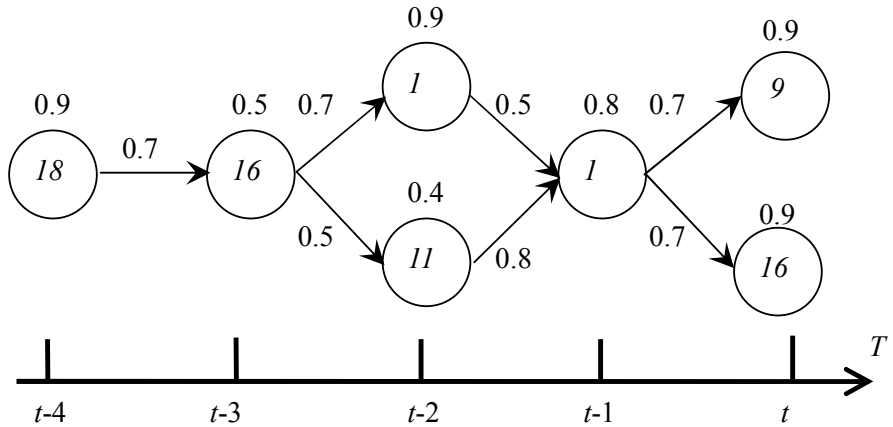
Comment [SM3]: Check. Should each new Chapter (or Section if you opt to change the title from Chapter to Section) start on a new page?

3.1 Weighting Driving Relational Maps

The ~~way~~ method of composing driving relational maps has been described in ~~told at~~ section 2.2.3. In this section ~~,~~ we ~~will~~ introduce how to weight the importance of each node and the relations between ~~the~~ adjacent nodes in ~~the~~ a driving relational map, so as ~~at this section,~~ to generate a~~ing~~ ~~the~~ weighted driving relational map.



(a)



(b)

Figure 3.1: (a) D~~A d~~riving relational map (b) W~~A w~~eighted driving relational map.

Chapter 5

Conclusion and Future Work

5.1 Conclusion

The purpose of this system is to reduce the rate of ~~the~~ dangerous events caused by ~~the continue~~various driving factors. We ~~will~~ compose a driving relational map as the system ~~gets~~ inputs factors of ~~the~~ driver behavior~~r of driver's factor~~, ~~the~~ nearby vehicles ~~factor~~ and ~~the~~ roadway factors, and then ~~taking~~ put this driving relational map ~~and the dangerous driving relational maps~~ into the matching process with dangerous driving relational maps. If the similarity between the driving relational map and one of the dangerous driving relational maps ~~from the matching process~~ is high, ~~it might happen this kind of~~a dangerous event may occur~~in the future~~. At this time the system will warn the driver to watch out for this dangerous event. Along~~nd~~ with the learning process based on ~~by~~ case-base reasoning, the system will become a flawless danger ~~ous~~ prediction system.

Comment [SM4]: Check. "Flawless" is quite a strong, absolute statement in English. An alternative would be to write "highly effective and flexible", "very reliable", or some other term. Using 'flawless' assumes this system will never make mistakes.

5.2 Future Work

Although this ~~dangerous prediction system~~danger prediction system has in simulation, proven capable of ~~already~~ predicting~~ed~~ dangerous driving events using a weighted relational map which is based on the host vehicle, nearby vehicles and ~~the~~ roadway conditions, there are still some aspects that should be improved.