TOSHKENT SHAHRIDAGI INHA UNIVERSITETI
INHA UNIVERSITY IN TASHKENT

Computer Science and Software Engineering

Comprehensive Assignment: Requirement Analysis

Capstone Design

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Requirement analysis

WHAT'S THE MAIN PURPOSE OF THE APPLICATION?

Nowadays technology is like magic astonish everyone with its power. One of the examples can be self- driving cars. This type of car starts to become widespread and use as clever transportation. Because these cars could be better for our future as all cars use the same code and follow the same as if respect each other. These thoughts lead to other reasons why we need these cars. Some of them are:

1. **OUR ROADS WILL BE SAFER**

Humans have hot blood do sometimes they try to against rules such as drunk driving, over-speed in the village/ around the school. This sometimes leads to a car crash and in tragic they could lead the end of people's life.

These accidents caused by drivers themselves are 94% and lest caused because of other reasons. This shows humans are less reliable on the road. On the other hand, self-driving cars rely on cameras, radars and other sensors to navigate. With coding, it follows traffic rules and reacts quickly than our shocked minds even in most of the dangerous times. So, these cars could bring peace on the road and the future will be safer

2. **WE'LL BE MORE PRODUCTIVE**

Today, time is like gold for many people, for others also it is not cheap. in the morning many people rush to work or to something as much traffic happens in the morning or lunchtime. They are in a rush but have to stop in traffic. Self-driving cars give them time to do most of the work such as eating lunch, napping. Also, you can find many people cannot stop themselves from touching phones and chatting. if they can do all of them safely in self-driving, why not use them without much fear of accident.

3. **WE CAN SAVE MONEY**

The cost of cars is in the sky in Uzbekistan. if a person wants to buy a car, he/she must pay the cost also to spend money to take a driver's license. Also, it uses fuel efficiency as it does not floor gas pedal because of mood or with other reasons except an emergency. One more thing is insurance premiums, if self-driving cars cut down the rate of accidents, it would not be expensive either.

4. **WE'LL MOVE MORE EFFICIENTLY**

Before, we remind you cars that are stopped traffic light. Self-driving cars are connected to the internet, their navigation uses GPS programs like Google maps and find the shortest way and automatically generate route. This will help less and less long stay in traffic lights and perfectly efficiently roadways.

WHAT ARE THE POSSIBLE FAILURE SCENARIOS AND CONDITIONS?

1. BAD WEATHER

As you know, we use radar sensors and optical cameras to navigate their environment while creating self-driving cars. However, these simple instruments are good at bad weather. At the bad weather, it shows unexpected results even break on the road so if we want to move self-driving car age, these things must be improved

2. MAPPING

Even self-driving cars have sensors and cameras, they should rely on GPS map information to analyze where it is. There could be some wrong way to go. So, a lot of data is stored in your car may not be accurate. For example, some road is already gone but it is still in Google map data and it led the wrong way.

3. NEW LAWS

If in future self-driving cars are put in use in transportation, there will be fewer and fewer accidents but it does not mean it will not. So, if this is a car accident by the self-driving car, who takes the blame? Programmer or driver. That's why we need new law based on different accidents

4. HACKERS

Not only good people live in the world. Even in the coding world, there are hackers who are breaks codes. Whatever code you create, there will be one day they will crush it. Self-driving cars` codes may be hacked, and hackers control them easily.

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