

Traffic Accidents in Korea

Team5

21500069 Kim Min Sik / 21500708 Jin Min Ha

21600202 Na Nu Ri / 21700238 Mok Ha Eun

TOPIC

A Study on the Analysis of Traffic Accidents in Korea
through the Visualization of Data

The problems and issues related to Traffic Accidents in Korea.

BACKGROUND & OBJECTIVE

Background

- The Death Toll from traffic accidents in Korea is ranked at the top among the OECD members. (serious social problem)
- There is a need to develop measures to prevent accidents.

Objective

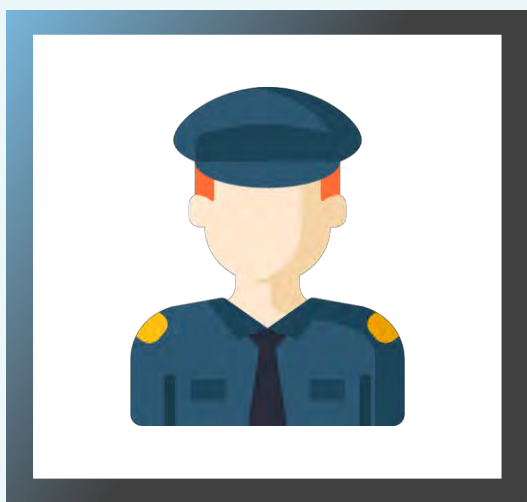
- To visualize the data of traffic death accident in Korea
- To suggest the insight to make precautions and measures to reduce the death toll from traffic accidents

DATA

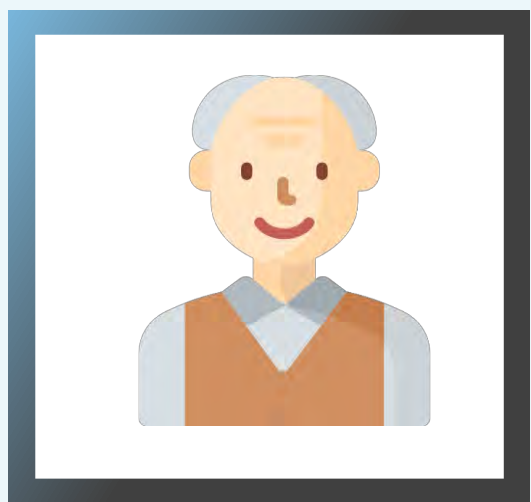
The Death Traffic Accident Information in Korea for 2018

- From Public Data Portal, TAAS(Traffic Accident Analysis System)
- Variables(20): time, day or night, weekday, number of deaths, location, law violation type, road type, weather, age and gender of victim and offender, accident type, etc.
- 3641 rows, 20 columns

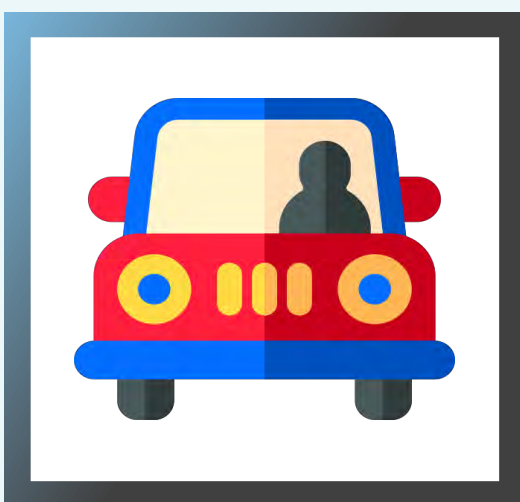
STAKEHOLDERS' OPINION



2 police officers



10 elders



40 drivers

In order to gather people's opinions and thoughts from diverse perspective, we interviewed and surveyed stakeholders.

Results of the interview

- There are activities to prevent accidents done by police.
 - Accelerated cameras, All-red time (전적색)
 - Traffic safety education, daylight hat service
- The big portion of the casualties is the elders.
- The Law dealing with traffic accidents in Korea
 - is strong enough. (interview with the police officers)
 - needs to be strengthened. (interview with the elders and the drivers)
- The low level of consciousness of people is the problem.

RESULTS & APPLICATION

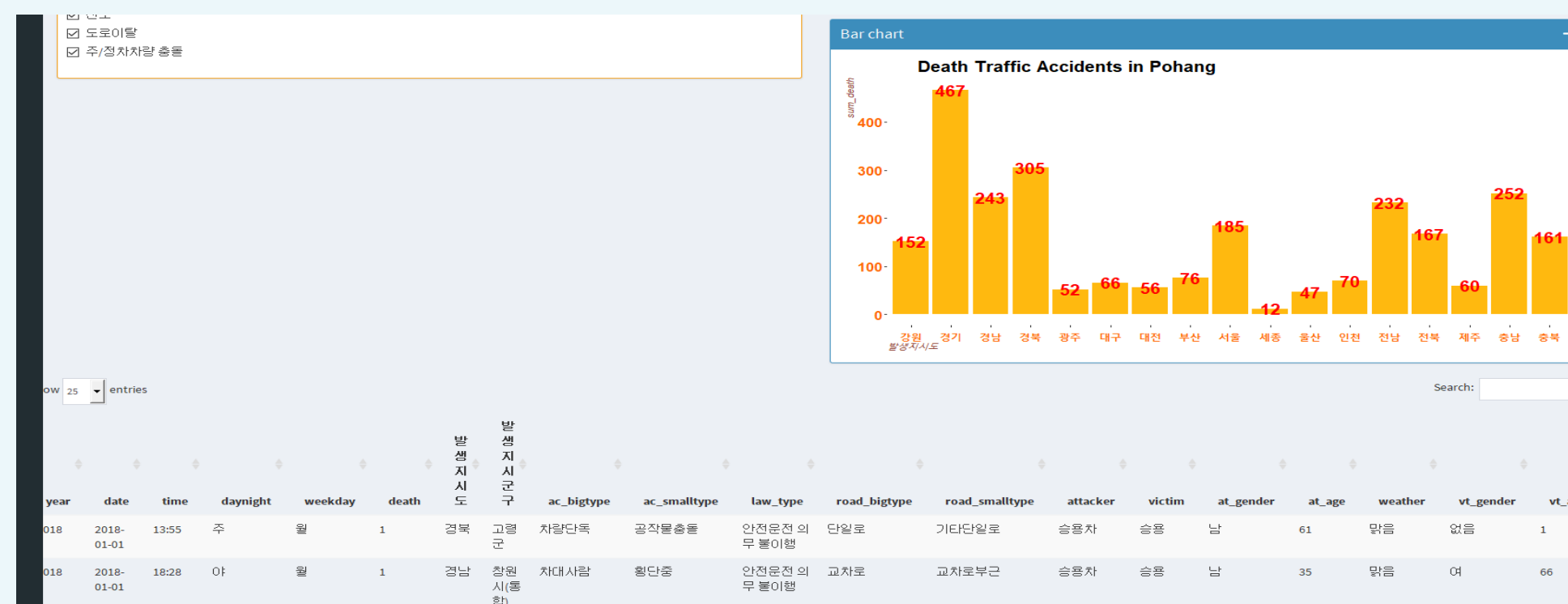
Shiny Dashboard

<http://jict.handong.edu:3838/dataVisClass2019/app/>



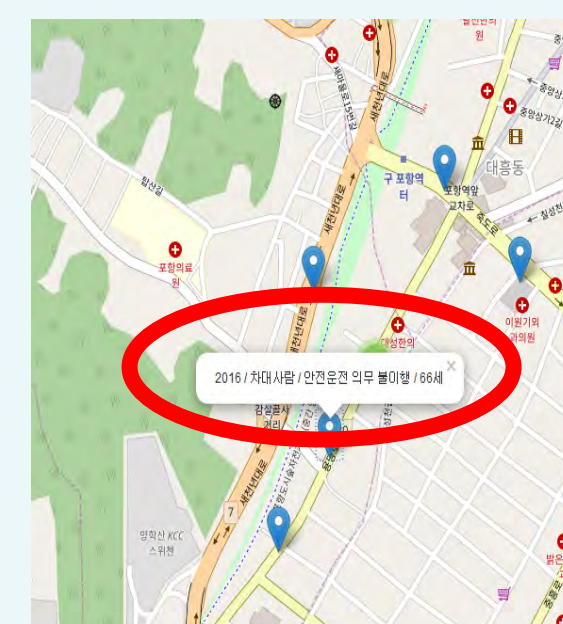
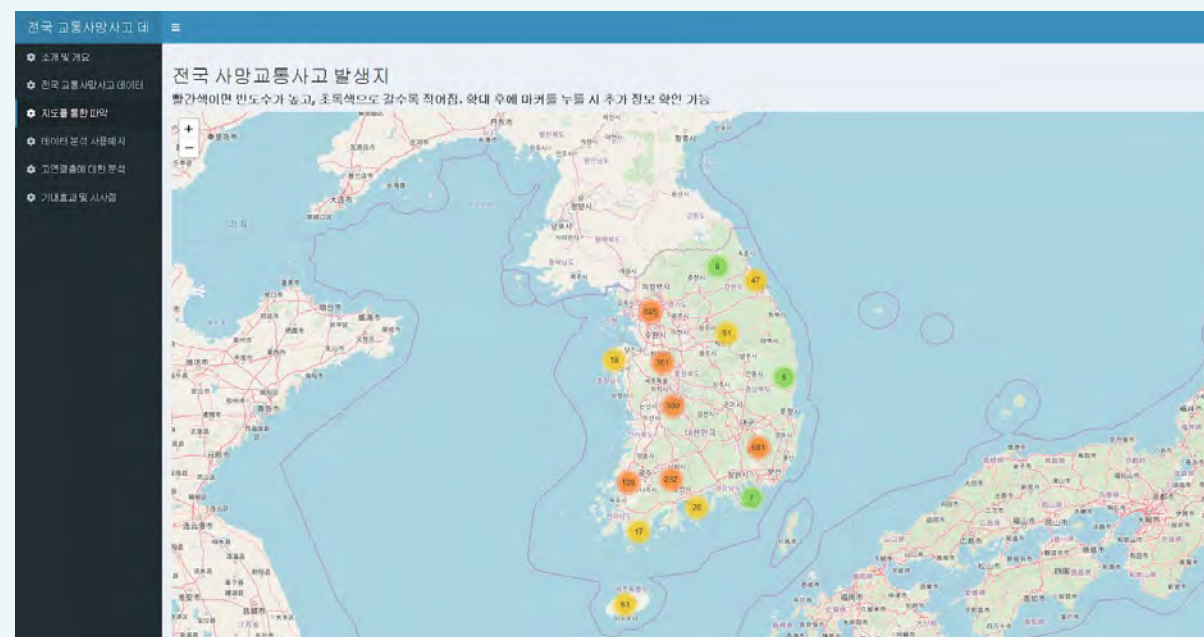
Tab Information: 1) introduction and overview, 2) national traffic accident data, 3) ggmap, 4) example of using data analysis and 5) expectation and limitation.

In this page, you can **select the variables of the traffic accidents** and get the **bar graph with the data table**.



Application: By identifying the factors involved in the death accident and comparing the relevant law, it will be helpful to make up for the lack of relative law.

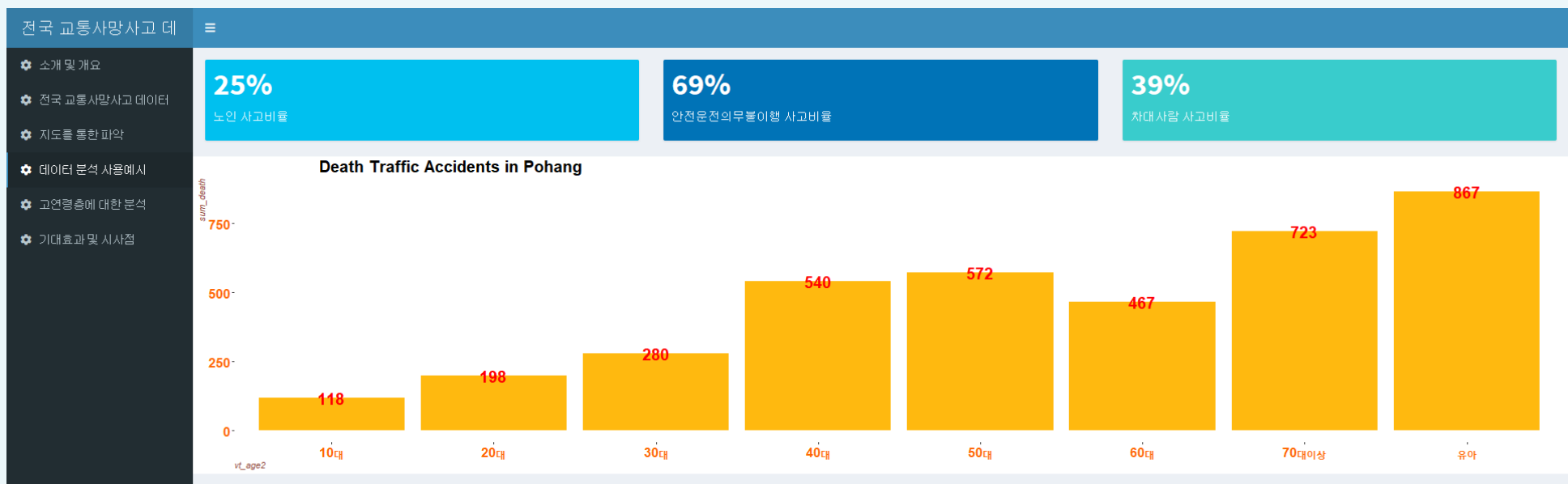
ggmap



This map represents the accident data depending on the region. You can get the information like accident type, reason of accident and attacker's age.

Application: You can identify the location where accidents occur frequently. This information can be helpful to check and improve the facilities on the road.

Example of Data Analysis



Application: By checking that 25% of victims of traffic accidents are the elders, you may have the insight that education for the elders are needed.

EXPECTATIONS & LIMITATIONS

Expectations

- It can be used to develop education contents.
- User can gain the traffic accident information easily.

Limitations

- Many options and buttons to click -> difficult to get the insight
- It's difficult to know the detailed analysis through shiny app.