Dataprocessing assignment

# The Case, E/R Diagrams, Tables & Visualizations, database and flask = MONITORING DRIVER DATA [PRACTICAL]

Create an SQL database to support your solution. Minimum requirements for the database are:

* Relevant and updated E/R diagrams giving an overview of the database, includingthe relations and cardinalities
* Description of the tables and the database design, including contraints and level of normalization
* The database SQL scripts must be written using PostGreSQL/pgAdmin, and can’tbe auto-generated by any tools
* Create relevant data, insert and test -in order to verify constraints and database integrity
* Create relevant database queries in order to visualize the data (You can use Python Flask for visualizations. This willalso allow you to show route maps with e.g. colorsfor indications of areas with driver problems. E.g. useOpenlayers, introduced in Itek 2 semester).

# Big Data & Autonomous Vehicles [THEORETICAL REFLECTIONS]

## Exercise 1 – describe five V’s of Big Data with AV examples

## Exercise 2

### Part a

In a headline form, describe in your own words how a cars entertainment center for video and music could provide content to users based on Big Data.

### Part b

**INGREDIENTS OF FACEBOOK NEWS FEED**

Facebook news feed is structurized in a way to deliver personalized experience to the user. It largely consists of blocks of posts, these posts can be either user posts, or FB page posts or even references to these posts (shares, likes, comments by other users(e.g. friends)). When you like(follow) a facebook page, you have an option to set up where the content should be displayed and that is either in the top section, stop the posts for 30 days, turn off or default setting which most people have and that is to let the algorith decide for them. In my opinion, these are the three main ingredients of facebook algorithm:

* **USER INTERACTION** – this is probably one of the biggest factors of what content is going to show up in your news feed, Facebook is largely know to track every single interaction that you make from the time of creating your profile. The key component of this the engagement time, that means much time are you spending looking at a written post/picture/video or in the other end if you just scroll through it. The more time you spend on something the more likely the content of the page or similar type of content is going to come up in your news feed in the future, this is mainly because Facebook is trying to maximize the time you spend on their social website in order to see as many ads as possible during your session. This time you spend looking at posts is ultimately more valuable than the number of interactions such as likes, comments or shares(these also play a key role – see ingredient 3).
* **TYPE OF MEDIA** –
* **POST POPULARITY** –

### Part c

**Marketing companies using Big Data to run campaigns on AV**

Google is already collecting a lot of information on the journeys you take based off your location and shares some this with you via Google timeline. It also collects more precise information about your commuting, especially if you use Google Maps. This information can be used to target people that often use both personal vehicles and also public transport, the reason for them to use public transport is possibly that they want to use the time spent traveling from point A to point B on some productive activity e.g. reading, responding to business emails, any type of writing, planning, making calls and target ads presenting the advantages of buying AV. This is definitely feasible in near feature where AV legally require minimum driver interaction and could definetely be a big advantage on long business trips where the time spent looking forward at a straight highway can leveraged. Another reason of doing this type of marketing could be to present people the possible improvement of their lives even if they are not aware of the advantages that AV provide.