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♠ LEUVEN STATISTICS RESEARCH CENTRE

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DATA

Data

INTRODUCTION

The datathon is neither an exam or a project. Hence, there is no particular assignment. We have prepared three different datasets, around which you can develop your pitch... In your 5 minute pitch on Thursday Feb 20th, bring us some insights, new ideas, conclusions and present these to the jury. There are 39 teams (163 students), make sure your presentation stands out. Be creative, illustrate your approach and explain any assumptions you take. A nice graph speaks more than a thousand words...

It is important to bring in your own expertise! Engineers, mathematicians, economists, linguists, neuro-scientists, computer scientists, etc... you all have a story to tell.

Your team has to pick at least one of the 3 datasets. Of course if you can tackle all three, be our guest. If you want to add extra data to enrich the three data sets, feel free to do so.

DATASETS

Your case has to be constructed around at least one of the three datasets below:

- Telraam
- 2. LeuvenAir
- 3. Garmon

1. TELRAAM (TRAFFIC DATA)

A telraam, a Dutch word for abacus, is small device placed on a large number of counting points across the city of Leuven. This affordable device counts traffic volumes. Pedestrians, cyclists, cars and heavy vehicles are each counted individually when passing along the traffic count sensor. The resulting traffic data is stored centrally and can be used to perform traffic engineering studies. The data can be accessed via an <u>API</u>. We prepared a couple of <u>Jupyter notebooks</u> for you already.

2.LEUVENAIR (AIR QUALITY DATA)

LeuvenAir is a bottom-up citizen project for mapping air quality in Leuven at high spatial resolution,

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with low-cost particulate matter sensors. This dataset contains a 2 year history across 116 different sensors spread across the city of Leuven. The particulate matter measured is PM10 and PM2.5. This fine particles are a danger for the human body! PM2.5 is particulate matter 2.5 micrometers or less in diameter. PM2.5 is generally described as fine particles. By way of comparison, a human hair is about 100 micrometres, so roughly 40 fine particles could be placed on its width. You will find all the info on the data with extra reading material on the following <u>link</u>.

3. GARMON (WEATHER DATA)

This citizen project is the new kid on the block. The project started in the summer of 2019 and has more than 80 active weather stations deployed since then. The garmon can be found on the same link as <u>LeuvenAir</u>.

GOOD LUCK! (SEE YOU ON THE KICK-OFF ON FEB 17TH)

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