

D2 - #storks

D-NAT-200

#storks

Human Ressources Issues in Healthcare

Correlations and *HR* management

Linking Demand Planning & Retail Inventory Management

Correlations and *Inventory* management





#storks

delivery method: GitHub

repository name: D-NAT-200_\$(graduationYear)_\$(groupLeaderName)

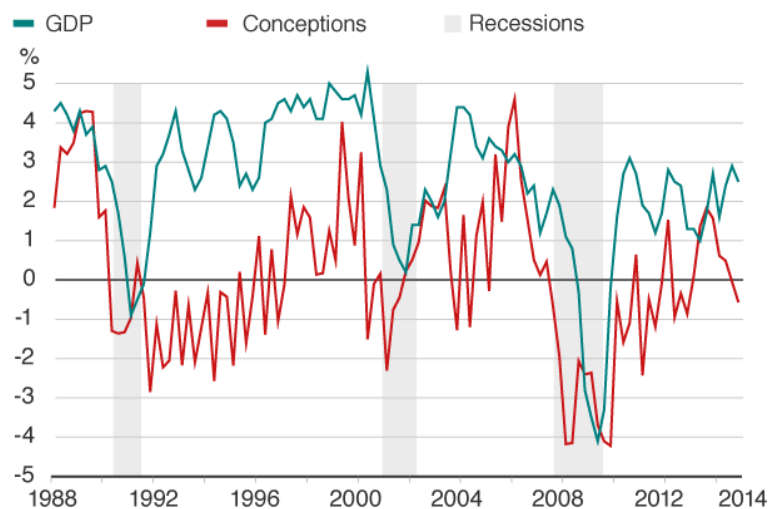


- The totality of your source files, except all useless files (binary, temp files, obj files,...), must be included in your delivery.

You may have noticed **human ressource management in hospitals** is a HOT topic nowadays. To handle more efficiently their material needs and their human resources, a large association of hospitals aims at predicting maternity occupation rates and **put in place an alerting system to help decision-making**

The primary purpose of **inventory management** is to ensure there is enough goods or materials to meet demand without creating overstock, or excess inventory.

The most common formulaic methods for successful inventory forecasting are trend, graphical, qualitative and quantitative. Greater demand for a product or service gives the firm the opportunity to grow the business, hiring more workers and increasing capacity to match the demand. On the other hand, oversupply and low demand forces businesses to contract, laying off staff and closing factories.



Many factors could influence pregnancy and natality, from **weather conditions** to **football results**, through **travel agencies activity**.

There are so many variables that could be taken into consideration, that the association decided to limit them to **twitter hashtags** at first.

Others variables must also be added, but secondly.

You are expected to interpret the data you fetched, investigating the question of **correlation and causality**. It should help you build a nice and handy **alerting system**, which needs not being complex, but requires to meet the final user needs.

Finally, build a dashboard to visualize your data and give more insight concerning the alerts.

DATA COLLECTION

To succeed in your mission, you must collect data from Twitter hashtags and from other sources on the one hand and data about natality (from the sources of your choice) on the other hand. Then, try to find correlations.



Consider any Twitter hashtag you want!

But most importantly do not restrict yourself to Twitter hashtags; feel free to add any other variable, such as daily contraceptives sales, holidays or mean temperature for instance.

You should nevertheless consider developing a **Twitter scraper** to get the hashtags you need in a convenient format, or adapting an existing one.



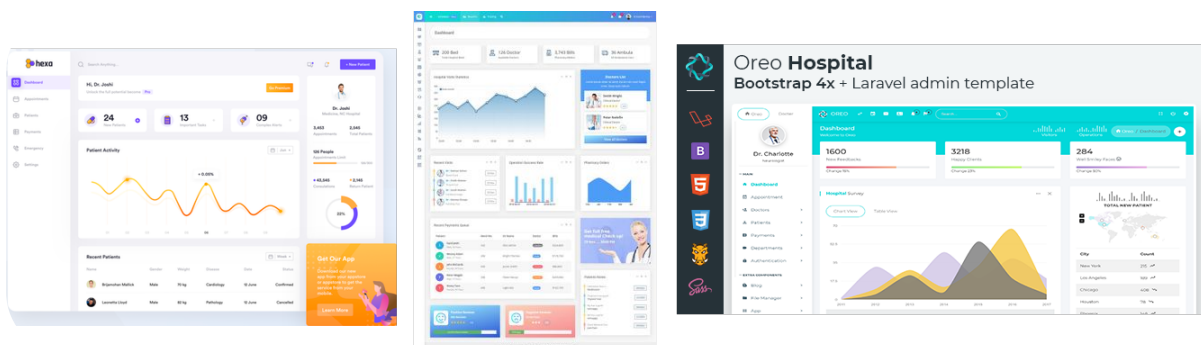
Developing a scraper may be compared to a woodworker forging his own tool: an investment that will ease and improve your future work.

DELIVERY

You are to write reports that contains :

- a clear and meaningful display of the evolution of your variables (among which Twitter hashtags occurrences must appear) over time alongside with births, in the geographical area and for the period you reckon relevant,
- all the conclusions you drew from these previous data/infographics, and the way you used them for your alerting systems (hospital and retail).

In addition to those reports, you are expected to deliver an alerting system that makes computations to predict maternity service congestion (through levels of alert) and another that makes computations to predict shortage of infant formula (milk).



CHECKPOINTS

This project is punctuated by intermediate deliveries, called checkpoints.
They are designed to accompany your progression throughout the rocky way to success.
They precise and complement the main deliveries.



These checkpoints are **mandatory**.
Each of them must be subject to a specific delivery.
If you do not succeed in proving these achievements, you'd jeopardize your competencies acquisition.

They are meant to deliver your work and defend it in front of your pedagogical referent.
If everything is OK, you will be granted competencies.
In case of difficulties, you will have access to extra-guidance so that you don't get stuck with a technical point.



These checkpoints do not cover the totality of the project!
You must not restrict your work to these achievements, but you should instead refer to features of the project itself.