Storks – Report

Dashboard display

To illustrate the display of the evolution of my variables over time, I chose to create an interactive dashboard on Power Bi. The dashboard monitoring focuses on the Toulouse geographical area, and on the present period from January 2021.

I could not share with you my interactive dashboard and its alerts, so instead I converted my dashboard visual into a PDF and I took screenshots of how my alerts work. I also added the .pbix file of my dashboard in case you have Power Bi Desktop, then you may open it.

Conclusions

Concerning sporting victories, I concluded that 9 months after a big sporting victory, maternities should expect an increased occupation. This means that each big sporting victory is leading to a little baby boom afterwards; if there are more than 5 victories of the Stade Toulousain in a season, Toulouse’s maternity is at risk to be overwhelmed the next year, so I put an alert that starts at 5 victories so that it can prepare itself.

Maternity rates are also affected by the national economic state, and it appears that the falloff in fertility coincides with the eventual deteriorating economic conditions. Therefore, there is a correlation between economy and birth rate that need to be monitored. I planned on alerting the maternity when the economic growth of the country enters in recession.

I concluded that there is a correlation between twitter hashtags and pregnancy. If we could count the number of pregnancy hashtags and predict the future births because of that, then the correlation is proved. But firstly, we would need to find the appropriate hashtags and verify that they really coincide with actual pregnant women. Then, if the answer is yes, the twitter hashtags could be useful and measurable. I chose the first ranked pregnancy hashtag, “#pregnancyannouncement”. Then, I set an alert that comes up if the number of utilizations of this hashtag achieve 10,000. It would mean that 10,000 women in France would be pregnant at the same time!

As it seems, because of the Covid-19 pandemic, we are approaching a demographic crisis. The national lockdowns have affected the population and decreased natality. By monitoring the changes of the pandemic, we could be able to predict the future birth rate. I imagined that if a French state enters in quarantine, the maternities of the state should therefore be alerted.

At contrary, I noticed that the French birth rate is increasing when there are waves of immigration. The fertility rate of women in the less developed countries than France is higher, therefore if immigrated women have children in France, there is going to be a higher birth rate. We could alert the maternities when there is a wave of immigration and count out the women in it.

In my research, I found out that If we want to know when the women are going to be pregnant, we could take all this information directly from them, through health tracking applications, for example. These apps are used by millions of women worldwide and they notably allow women to log pregnancy tests, providing a ground truth source of pregnancy data for us to exploit. Alert the maternities when a woman declares that she is pregnant on the app is the best way of using these data from my point of view. The more women will use these apps, the better; therefore, I decided that, when 1 French woman in three (30% of the French women) will have a health data app, maternities will be alerted.

Lastly, I surprisingly drew the conclusion that weather and particularly temperature have a big correlation with natality. In fact, only a day of bad weather (or good, depending on the country) can affect the birth rate of the year after. With that conclusion, we only must monitor the weather and alert the maternities in a case of abnormal heat or cold.