

Decision making on market trends information with sentiment analysis and natural language processing

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Decision making is part of everyday life of individuals and companies, it cannot be avoided with different consequences depending on the importance of the matter at hand. Nevertheless this McKinsey Consulting firm study among executives found that 60% of them actually thought that bad decisions are as common as good decisions, and even a 12% said that good decisions are not a common thing really (Lovallo & Simmons, 2010). Why do decisions fail have different reasons, from not actually getting the problem right or the path that we need to go to solve the problem, or even on how the possible outcomes are evaluated by decision makers (Whyte, 1991). Data decision making has several advantages, like having confident decisions, and even if it does fail, decision makers have better arguments for their decisions (Stobierski, 2019).

20 years of surveying

MDM (<https://marketdynamic.mx>) has been doing market research for almost 20 years, has offices in the most important Mexican cities, and has some good size clients like Janssen Cilag or Shering-Plough. Part of their daily work is to provide companies information on different matters, but mainly how the market is behaving, this is made by surveying different groups, directly used to be available before the pandemic, but now telephonic and social media platforms are the most common way. Unfortunately, these methods have problems on their own, being some of them that people not always tell

the truth or simply they are not accurate enough, sometimes it is complicated to find target groups and fill the required quota and this makes data not statistically significant to make a good analysis.

Sentiment Analysis as a tool of surveying

This AI technique, can help business to understand the sentiment of their own brands on people conversations around social media platforms (Gupta, 2018), and can be used to confirm or to seek for different trends of information depending on the actual subject we are surveying, and process this information with Deep learning or even a Neural network to deliver different results, this can be used for confirm or deny something that was actually collected using more traditional methods.

Deliver information for decision making

With the combination of transitional surveying methods and sentiment analysis, we can deliver a platform that can monitor the sentiment on different subjects that MDM clients want to survey before a more engaging strategy or other qualitative methods for gather information, can be a first approach for companies to know if the insights they have about people's ideas are in consonance of they market strategy or the actual decisions they are taking.

Historical data and predictive analysis

Can we actually predict the sentiment? Well, that is actually hard to know, several data and historical records may needed, but with more information a model is trained and

feeded, if it is well built, it can actually help to construct prediction models on time series or even on regression, if the data shows an actual trend, or can even confirm a chaotic train of collective thought, the worst data is the one that we actually are not collecting.

Recommendations

1. **Use of the new tools available** - For some reason, this company is stalled in the old procedures of surveying, sometimes even with paper and pencil. A lot of benefits can sprout from using modern tools, from costs to even the actual data storage and collection.
2. **Change data collection and storage** - A lot of companies in latin america, and I don't know if other parts of the world, have an exaggerated use of Excel to save and retrieve data, it is a good software for its own purposes, but there actual database systems that can really help to store, collect and retrieve data for different contexts and even to prevent data redundancy, among others.
3. **Prevent data redundancy** - As stated before, mostly caused by the way the company stores its data, is not always possible to know if it is accurate, have not been modified or some records were deleted, as a lot of .xls file versions appear.
4. **Have own records for historical data** - Following the same path, having historical data from previous studies could be advantageous for several reasons, to see new perspectives as new data comes, or even to apply some time series models for predictions, clustering or classification.

References

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