Reflection- How Text Analysis can be used in workplaces

As a student of Data Science, I became familiar with text mining and text analysis in one of the assignments I did just recently. The assignment required me to analyse an unknown list of text files and come up with insights into it and recognize what the files were talking about. This was a challenging task, which required me to mine the text files, clean them, visualize their words in groups, perform different types of clustering onto them and come up with what they are about. Working through the assignment, I came across a number of ways which may have a place in a workplace. This blog post includes my reflection of the techniques used in my analysis and how they can be used in a common workplace.

One of the largest problems in every workplace is the management of files and folders. When a large number of employees, each working on different areas and everyone sharing their documents contributing to the knowledge base of the company, it is easy to lose some files and folders. Doing a file or a folder search may not always guarantee that the files can be found. Also, the names of the files are only known by the person who saved it, a new person cannot be able to find them if he/she needs to. Searching within the files is always a difficult task, and only a handful of people know how to look into a file using bash commands. In such organizational arrangements, if there is a search method that looks into the files and uses text mining to search for files, then it would solve the problem. Having text analytics search in the knowledge base of a company furthermore helps to prepare new materials by referring to older materials that are already present there.

Working in a large organization means almost always, having a large number of incoming and outgoing emails. Nowadays, due to advancement of email technology, every employee has access to their own organization's email. The managers also most of the time have access to the entire email server and are able to look at the entire company's email. If by chance, a manager needs to know about a project, it would be very difficult to search through them without entering the exact word in the email search box. Such problems can be remedied if a text analysis tool were to be installed in the server. Also, clustering algorithms can be made which group emails in the email server as soon as they are sent by an employee. Companies like Google have been providing their email client service to companies, where their email search uses text analytics to search through the emails and return relevant emails even though the keywords are not an exact match.

Besides doing a plain simple search, the managers, having the access to all the emails can implement semantic analysis to all the incoming emails from foreign email domains. The incoming emails can be from customers, clients or just some general enquiry. Keeping an eye in the semantic analysis factor on these emails can also be an eye opener. A simple system can monitor the emails and notify the manager if the sentiments of the incoming email is negative. It will help the manager to be ready and handle those situations beforehand, even before the employee to whom the email is addressed to reports the problem. This can improve the transparency of the organization in all levels.

Another instance where text mining can be used is in the company’s internal chat systems. Most of the companies use Skype for business for formal chat, along with their own private chat systems. In such systems, it is expected that there will not be any private and sensitive information circulated. So, text analytics can be implemented there as well to know what the hot topics of the company are, and have a picture about them, which may eventually help planning and making decisions.

Although there are a number of ways that the text analytics can be used in the workplace, care should always be taken to respect the privacy of the people concerned. For instance, if emails and chats need to be monitored, care must be taken to only monitor the official emails and chat bots and not personal ones. Also, this information should not be made public to other employees and there need to be only a definite group of individuals who have access to this information. Also, decisions must also not be made solely based on the results of the analysis, as there are chances that they may be wrong.

Hence, text analytics and text mining methods are a powerful way to see what is behind the picture very quickly. They would find a place in accessing internal documents, emails and messages so that the organization can be run smoothly and transparently. However, as the saying goes “With great power comes a great responsibility”, care should be taken not to gather and leak the private information about employees, as it can be detrimental to the entire organization.