Data Mining Journal

**January 30 2020:**

<https://fivethirtyeight.com/features/the-rooney-rule-isnt-working-anymore/>

In the NFL, the Rooney Rule is used to promote the interviewing and hiring of minority coaches. The rule was put in place in 2003 due to an extreme disparity between the percentage of coaches who were minorities and the percentage of players who were minorities. The rule increased the amount of non-white coaches immediately. However, in the previous coach hiring cycle, the percentage of non-white coaches has dipped. Many candidates were overlooked in favor of white coaches. Furthermore, many candidates felt that they were only interviewed to fulfill the Rooney Rule, and did not have a serious chance to be hired.

This data seems to show a discouraging trend in head coaching hires. I feel that it is important to have figures from many backgrounds within a locker room, in order to be able to connect with the players easier. Race plays an important part in that, especially in the NFL which has a huge majority of its players being non-white. I think this trend can be extrapolated to society at large. The owners of the NFL teams, who are mostly white, are inclined, whether conscious or not, to hire white coaches. This can negatively impact the performance of the team because of passing over more deserving candidates, because of race. I think this shows that people are more inclined to trust and believe in people who look similar to them.

**February 6, 2020:**

<https://www.entrepreneur.com/article/269946>

Google has been leading the predictive analytics industry in regards to job hiring and management. Google’s goal is to use predictive analytics in its HR department. They hope to predict employee outcomes and turnover and also maintain proper staffing across the company. Google has also released re:Work. re:Work is an application intended for small businesses to help them manage their employees and hiring practices better like Google. Google also offers guides in predictive analytics. The most major change resulting from these analytics comes in their hiring practices. Google has made changes based on data on the interview process, by reducing the number of interviews to four.

Google has used data mining to improve their interview process. For example, Google found that any more than 4 interviews are not conductive to a good interview cycle. Another example is that Google is looking at departments with high turnover and they can look to implement solutions that improve those numbers. This article is interesting to me in two ways. First, I think the predictive analytics that Google is using could be used in many industries. It would be extremely beneficial for companies, but it would also allow employees to waste less time at companies that are bad fits for them. Secondly, I find it fascinating that Google is so willing to advertise their analytics methods and share guides and software. To me, most companies would probably want to keep their competitive advantage with this software by keeping it secret.

**February 27, 2020:**

<https://www.businesswire.com/news/home/20200225005830/en/>

A company called Quantzig has released a new social media sentiment analysis software. This software analyzes social media to produce measurable outcomes. Sentiment analysis uses social media text to produce data on the opinions on consumers. Using this data, companies can shift their business and marketing to better reflect consumer trends and improve sales. The technology has been needed with the increasing amount of data being produced, especially in the world of sports technology and entertainment. The company’s software takes unstructured opinion data and, using data mining techniques, morphs into actionable hidden knowledge on products, goods, and services. The technology helped companies achieve a 65% reduction in survey speed and reach 3 times higher customer satisfaction.

I find it fascinating that the technology exists to be able extract opinions from social media. This technology can help scientists get greater data on the opinions and ideas of the world. Instead of relying on optional surveys, for example, data can be directly gathered from social media. This can substantially increase the number of instances. In addition, the software Quantzig has produced will help scientists and companies extrapolate from the shallow knowledge into hidden knowledge using data mining techniques. There are some ethical concerns from using this technology, such as, is the data being collected actually public information? Or, the possibility of companies using unethical marketing from this data.

**April 2 2020**:

<https://www.kdnuggets.com/2020/03/brain-tumor-detection-mask-r-cnn.html>

AI and data mining are becoming growing tools in the medical imaging field. In this article, the author is focusing on identifying brain tumors from MRIs. The tool in use is called Faster R-CNN. The tool is used for object detection tasks, in this case a brain tumor. R-CNN extracts maps from the image, then the maps are passed through a tool that returns possible candidates. The candidates are then brought to equal sizes and then classified by R-CNN. The author wrote a detailed step-by-step instruction on how to construct the model, after training the model, he then tested it and had pretty good accuracy.

This type of model can be incredibly useful in the medical field. Working alongside doctors, this tool could improve the accuracy of tests and reaffirm doctor’s prognosis. It could also reduce human error. The beauty of it all is that the model will continue to get better as it receives more results through machine learning. AI imaging can be moved beyond brain tumors, and even beyond MRIs. As the sophistication and technology increases, the tools can be used in many different types of imaging and even in other fields.