Proudly to say that I am completed a Graduate Certificate course in Data Science and AI with the Insititute of Data which is accredited by RMIT university.

What brought me to this course is that it is the first step into Data Science and AI. I could utilize this set of knowledge in my algorithms trading projects and many more predicting models in the future.

Thanks to Amin and Jin who have guided me throughout the course.

And, here is my project topic: Sentiment analysis on financial news headlines which is based on NLP, Machine Learning, and Deep Learning.

for business aspects, this project can be a handful tool for sentiment analysis for fundamental traders who trade stocks regarding company activities or news releases. This tool can be developed to predict whether it is positive or negative daily news, and reduce individual-time consumption in digesting news each day.

Technical perspective, the topic requires text-preprocessing techniques for NLP before converting the texts into metrics for Machine Learning and Deep Learning.

During converting text into matric with Count Vectorizer technique, I am applying feature selects called, Kbest-selection with the vector spaces to reduce noise or unnecessary features for classification which helps all 3 training models that will be mentioned following show better performances as well.

Models, the 1st model is a Multinomial Naïve Bayes, this model gives a score of about 86% accuracy, and the precision on predicting positive news is 92%. the 2nd model is a stacking model or ensemble method, the model gives a score of about 70% accuracy, and the precision on predicting positive news is 70%. The last model is neural network modeling, with an accuracy score of 84% and precision on predicting positive is 84%

To sum up, Multinomial Naïve Bayes gives a better performance of the predictions. It shows a higher accuracy score and precision rate.

The next steps, are to collect a larger dataset on financial news headlines with their labels, and the extent to analyze news in many other types of investments eg. including cryptocurrency news.

Best,

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