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Stocks Price Prediction: Economy and AI

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Abstract -Stocks have been the centre of the world economic for around more than a century. The basic needs of the man are food, water and shelter but the dynamics of how these needs are met changes with the time. One of the most important aspects is the economics of the mankind. The world wars, the dot com crash and the cold war have had great impact on the stocks. The next big impact is certainly going to be that of the Artificial Intelligence.

***Key Words*:** LSTM, RNN, Normalization algorithm, efficiency, accuracy, fragility, economics, machine learning, deep learning.

1.INTRODUCTION

The changes we see in the tech world are nothing but the dawn of the changes in the field of the technology. We are up for a revolution in the technology industry. What makes the course of the changes more and more interesting is the fact that the technology is more of built to makes changes that will change the course of economy in more than one way. The stock market has been the center of the world economic for more than 100 years and it actually need change.

We are more inclined t o a very innovative approach towards predicting the prices of the stock. It might look more and more relevant to bring in the technology where we have been doing the stuff traditionally. AI is the approach that can actually effectively combine and use the human intelligence and the machine power of the computer. We cannot change our focus from the short term just for the immediate benefits that it tends to offer we need more and more immergence from the domain of the long-term goals that we can aim for. In the era of the technology changing with the time we can make the stock game a more relevant aspect of the life of individuals and make it less risky.

Moreover, our aim is not to replace the humans rather improve the way humanity has evolved in years. We want to enhance the productivity of the humans rather than focusing on replacing them and the fragility. It is more of a combined effort and a step towards making the best out of the technology to make the humans life easier.

2.How do you do it?

2.1 Data: - Although a lot of people waste time around how to get the things done post data and on algorithms, we forget to understand the importance that must be given to the data we collect. We should lay great emphasis on how the data is collected and make efforts so as to maintain a better quality of the data. We must ensure that the data we collect is of the best quality and fresh as far as possible. Use of the altered or edited data is strictly unadvisable.

2.2 Libraries: - Working on data has also become a lot easier with the use of the algorithms that are readily available and user friendly. We may constantly require the NumPy and Pandas so that we can work on the arrays and the data frames with better efficiency. It is more than enough to understand that the fact that the use of the libraries can reduce the working in the data do greater extent.

2.3 Loading the training data set: - We have to load the dataset that we require to work on. The libraries we get might be useful to make the flow smooth and assure no data is lost

2.4 Using the stock price column: - The main target for price prediction is the column of the stock price. We have to use the column to be trained and later used for the predictions.

2.5 Normalizing the data: - Data normalization is the step which is often neglected and it might lead to results which might appear to be ridiculous and useless. We can use the functions to normalize the data to fit the needs.

2.6 Creating the train test split: - We need both the training and testing sets so that we can train the data and subsequently test it using the split. The train test split us usually .80 and 0.20 parts. It is varied if required.

2.7 Changing the shape of the data if required: - This is also one of the most important aspects of the process. We may require different shape of the data for the specific requirement and it is utmost necessary to live up to it.

2.8 Machine learning skills: - Machine learning is one of the approaches that is mostly commonly used in this field. Machine learning helps to create the machine mimic the possibilities of the real-world events in our case the stock prices. We can use the Support Vector Machines, Random Forest, Regression and other approaches for solving the problem at hand.

2.9 Approach using the deep learning: - Deep learning approach is more detailed way of approaching the problems. It is the closest way to mimic the human way of working by training the neural networks. We can use any of the networks

where we can have the time series skills for our model. We can particularly use the RNN and LSTM because of their ability to reflect on the past data.

2.10 Fitting the model: - Once we are up-to the model we have to fit the model and move ahead with the further steps in the learning.

2.11 Entering the real time data: - These processes we have done were to build models but we have not yet worked on the live data. We need to add the real time data so that we can get the real time insights.

2.12 Predicting the prices: - The curd out of the milk and butter further is all the world revolves around. Everything said and done we must now focus on getting the real work done and predict the prices of the stocks in real life

2.13Comparing with the real vs expected: - The developed might have greater impact on the world so we need to test the model for its use, accuracy and evaluate it thoroughly before it is put in the market for real time use.

3. EFFECT ON THE WORLD ECONOMICS:

3.1 Technological changes global firms: - Currently the countries like the USA and China are updating themselves to make themselves proof to changes. Worlds leading organizations like the Berkshire Hathway, BlackRock, Vanguard and other are trying to rope in the best AI tools to assist the manpower. The biggest consulting giants like the PWC, KPMG are already in the process to develop the algorithms essential for making the best out of the AI

3.2 Effect on the developing nations: - The priorities of the developing countries are far different as that from the developed ones. For a country like India investing on the technology might be a priority but still the basic needs and the inflation are the basic challenges to be tackled first. Developing nations have been dependent on the developed ones for the tech for years but this dependency not only leads to the cash drain but also the brain drains. Best of the brains of the country leave for better AI opportunities abroad. Maybe inculcating awareness about the AI tech at the very foundational level might help.

3.3 Human Centric vs Machine Centric: - This is worst of the ideas that one gets around when we hear of the term AI. As far as any technology in the domain of the AI is concerned it has nothing to do with pitching and putting the machines against the humans. It has less to harm and more to offer to the human's intellect. For centuries humans have been using animals to ease their own work. Similarly, we can use the technology to ease our work and embrace for the changes and challenges like the climate change. AI will help humans manage money and also help add to the value of the human instinct. We may consider that the human instinct is more superior but that might not be the case always. Yes, it is true that it may make some of the job roles not required but at the same time it will create more jobs.

3.4 Scope and Challenges: - It is too early to have a word about how the world will evolve with the AI but it more than sure than world leaders need to come together to make the AI safer for the humans. IT should not happen that the AI is killing the human system of the economics based on the work and earn. It won't be wise to assure as to how the human and AI relationship in other domains would be but for the domain of the economy it will be more of a assisting tool because of the fragility of the economic market which is based on the climate, disasters, news-media, market needs, inflation, military stability of a country, safe borders, responsible citizens and many more factors beyond the ability of the humans and off course machine.

4. CONCLUSIONS

The greatest of the empires were destroyed, built and cherished only on the basis of the economy. We are at the dawn of the changes in the field of the economic progress which is going to be tech driven rather than man driven. As if now the difference the humans and the machines is more than obvious but as the technology will be built in near future, we will get to see that technology will change so rapidly that we may not get to see the humans and AI as very different. There will be time in the near future where the AI will seriously and notably reduce the difference between the human and artificially generated intelligence. AI will disrupt the counties and stock markets of counties who fail to advance smoothly with the changes in the AI technology.

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