

1. Stock market forecasting using Time Series analysis

Overview -

Stock and financial markets tend to be unpredictable and even illogical, just like the outcome of the Brexit vote or the last US elections. Due to these characteristics, financial data should be necessarily possessing a rather turbulent structure which often makes it hard to find reliable patterns. Modeling turbulent structures requires machine learning algorithms capable of finding hidden structures within the data and predict how they will affect them in the future. The most efficient methodology to achieve this is Machine Learning and Deep Learning. Deep learning can deal with complex structures easily and extract relationships that further increase the accuracy of the generated results.

Machine learning has the potential to ease the whole process by analyzing large chunks of data, spotting significant patterns and generating a single output that navigates traders towards a particular decision based on predicted asset prices.

Dataset - <https://www.kaggle.com/parithy/stock-prediction>

Applications -

The real time - time series analysis of stock markets can help investors predict the next trade price for any stock. By a correct prediction, investors can invest in the right stock. This would also allow them to refrain from unwanted loss.

2. Customer Purchase Prediction

Overview -

Predicting customer behavior in the context of e-commerce is becoming more important nowadays. It increases customer satisfaction and sales, by facilitating an increase of customer experience through personalization, recommendations and special offers. By utilizing clickstream and additional customer data, predictions can be carried out, ranging from customer classification, purchase prediction, and recommender systems to the detection of customer churn. A variety of machine learning models can be created to conduct these kinds of predictions.

Dataset - <https://www.kaggle.com/c/acquire-valued-shoppers-challenge/overview>

Applications -

For any e-commerce platform, predicting customer behaviour can be really of a huge benefit. Insights from previous data can help these companies understand business and allow them to take actions in the proper direction.

3. **Movie Recommendation System**

Overview -

A recommender system is a simple algorithm whose aim is to provide the most relevant information to a user by discovering patterns in a dataset. The algorithm rates the items and shows the user the items that they would rate highly. An example of recommendation in action is when you visit Amazon and you notice that some items are being recommended to you or when Netflix recommends certain movies to you. They are also used by Music streaming applications such as Spotify and Deezer to recommend music that you might like.

Dataset - <https://www.kaggle.com/rounakbanik/movie-recommender-systems>

Applications -

A movie recommendation can be applied to a large number of use cases in order to facilitate the customers to suggest the content. The suggestions provided to the user can help them decide the relevant content to watch and can henceforth prove beneficial for the business.