

## Machine learning for exchange rate (CAD/USD):-

*The impact of exchange rate between CAD/USD and how we can use machine learning to project the exchange rate.*

The exchange rate between the Canadian dollar (CAD) and the United States dollar (USD) is an important indicator of the strength of the Canadian economy



as it affects trade and investment between the two countries. When the exchange rate is high, Canadian exports become more expensive, which can lead to a decrease in demand from foreign markets. Conversely, when the exchange rate is low, Canadian exports become cheaper, which can lead to an increase in demand from foreign markets. The exchange rate also affects the cost of imports, which can have an impact on inflation and consumer prices.

## Machine learning to project exchange rate:-

we can use machine learning algorithms that analyze historical data and patterns to make predictions. One popular algorithm for this is the recurrent neural network (RNN), which is designed to process sequential data. RNNs are particularly effective for time-series data, such as stock prices, where the order of the data points matters.



To use machine learning for exchange rate projection, we first need to collect relevant data, including historical exchange rates, economic indicators, and political events that may affect the exchange rate. Once we have the data, we can preprocess it to remove any noise and normalize the data.

## Random forest model:-

Random Forest is a machine learning algorithm that can be used for regression and classification tasks. It is a type of ensemble learning algorithm that combines multiple decision trees to make predictions. The algorithm works by creating multiple decision trees based on subsets of the training data and aggregating the predictions of the individual trees. This approach helps to reduce the impact of individual decision trees' biases and errors, leading to more accurate and robust predictions.

