**Abstract**

In today’s world web traffic is one of the serious issues faced by many. Web traffic tends to hinder the smooth user experience and it is also very challenging for the web service providers to maintain a smooth user-server interaction. We are looking to overcome this problem by building a prediction model to forecast the web traffic in advance to avoid all the problems faced. Our model thoroughly studies the previous web traffic data to efficiently predict the web traffic of a particular website at a given point in time.

Forecasting is one of the important goals of mining time-series databases. The efficacy of Time series forecasting has been proved while decision making in various domains. This method is vastly different from the other proposed methods for prediction and analysis. This paper proposes the use of ARIMA and LSTM algorithms to forecast web traffic.

**Introduction**

The increase in web traffic could pose a hindrance to the workflow and also creates a lot of issues thus an organization is forced to find a way to manage the web traffic efficiently to be successful. Many would have come across extraordinarily slow websites that take an extendedtime to load once the traffic on their specific website is high, for instance, we may have gone over a few internet business sites that may crash when the number surpasses the expected limit. which causes a lot of weight for the customers and on account of that it could reduce the customer's evaluations of the site and rather use another site, thusly, diminishing their business. Appropriately, a traffic the board strategy or plan should be set up to diminish the peril of such occurrences which could be unfavorable to the presence of the association. Starting in the relatively recent past, there wasn't a necessity for such gadgets as most specialists could manage the traffic assembly anyway the phone age has extended the solicitation to an especially level for specific sites that associations couldn't have reacted quickly enough to keep up their standard customer support level.

Time arrangement is an information grouping in sequential request. There are numerous regular instances of time arrangement, as sun powered irradiance, probabilistic expectation, etc. Time arrangement research incorporates numerous viewpoints, for example, time arrangement investigation, information collection and capacity, time arrangement expectation. Time arrangement anticipating is to foresee future information or variety propensity by examining chronicled information and it is a hot exploration point due to its wide applications in account, development costs expectation, and some different fields.

Ordinarily, we have two well known sorts of worldly information, first and the acclaimed one is time arrangement information, and the second is information with time focuses. Time arrangement information is a significant class of worldly information protests, an assortment of perceptions, which are in sequential request made. A period arrangement is a succession of noticed information, generally requested on schedule. Inside the composing various techniques have been proposed for expecting web traffic. They can be described completely into two social occasions reliant on the examined models: nonlinear assumption and direct conjecture. The most by and large used models Linear guess models are: I) HoltWinters Algorithm ii) AR Model iii) MA Model. The assessment focused on rehashing neural associations is consistently used for nonlinear gauge. Discrete wavelet change (DWT) parcels the data into straight and non-direct portions that help improve guess exactness. ES-RNN extends execution by using GPU figuring to set up the dataset.

Our proposed approach utilizes Long Short-Term Memory (LSTM) RNN. Adding a piece of new data to RNN changes the current data by adding a capacity. Subsequently, the entire data is refreshed, i.e., there is no regard for 'significant' data and 'not all that significant' data as a rule. Both RNNs have their present layer of input circles. It permits them to keep data and information in 'memory' extra time. In any case, it could be hard to prepare standard RNNs to take care of issues requiring long-haul fleeting conditions to comprehend. This is because the misfortune work slope rots dramatically extra time (called the issue of the disappearing inclination). LSTM networks are a sort of RNN that utilizes other than standard units, uncommon units. LSTM frameworks incorporate a 'memory cell' which can hold information in memory for significant periods. As data enters the memory when it is yielded and when it is lost a progression of doors is utilized to follow it. This design assists them with seeing longer-term conditions. GRUs are like LSTMs yet are fundamentally rearranged. They likewise utilize a progression of doors to control data streams, however don't utilize diverse memory cells and futile entryways. We use LSTM RNN for this impact to have more memory than traditional RNN.