Airport Passenger Traffic Data Prediction

submitted for the course

B.TECH. PROJECT (CSN-400B)

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1. Abstract

We develop a machine learning approach using different techniques to forecast the airport passenger traffic. This project aims to implement time series data prediction on the data obtained from official websites and also to try out simulation and econometric modelling.

Typically, the forecasts are not final objectives in and of themselves. An essential ingredient to preparing forecasts is to understand the purpose for which they will be used.

2. Work Progress

a) Completed

1. Implemented the following 3 types of time series modelling
    a. Multi Layer Perceptron (MLP)
    b. Long Short Term Memory (LSTM)
    c. Autoregressive integrated moving average (ARIMA)
2. Identified possible features for Econometric Modelling. Some of them are demographic factors such as the level of and growth in the economy, population, incomes, Airline market factors, including fares, flight frequency, and schedules, Air transport production costs and technology.
3. Collected the flight passenger data from Kaggle.
4. Collected the demographic and economic factors for econometric modelling from the US government website

b) Future work

1. Improve accuracies of time series modelling.
2. Implement Econometric Modelling.
3. Implement Market Share Analysis where current activity at an airport is measured as a share of some other aggregate measure.
4. Implement Simulated Modelling.