



VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

SCHOOL OF ADVANCED SCIENCES- (SAS)

Fall semester-2022-2023

**AIR PASSENGER DEMAND
FORECASTING**

Submitting fulfillment for the SET-project

MSC BUSINESS STATISTICS

BY

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ABSTRACT:

The most significant factor to consider when making predictions is travel demand, which accounts for 80% of the increase in passenger traffic. An additional 20% is stimulated by the availability of additional frequencies. Demand for air travel is almost always correlated with the state of the economy. Time series forecasting methods that can be implemented automatically are offered. However, they are not rote formulae because they are founded on a flexible philosophy that can present various models for discussion. Furthermore, it offers a variety of diagnostics for determining how effectively a series can be forecasted, both qualitatively and statistically. The models under consideration are known as ARIMA models because the model fitted to a long memory time series is based on advanced time series analysis of AR schemes fitted to residuals \hat{Y} generated through parsimonious best lagged-stationary autoregression. An ARIMA model provides both long-term and short-term projections. The goal of this research is to create a forecasting model of short-term air passenger demand based on big data from search queries in order to identify these short-term variations.

KEYWORD: Time Regression analysis, Moving averages, Auto Correlation, Robust regression.

Work plan

Task	Description of the task	Start Date	End Date
Literature Survey	Preparation of Abstract	10.10.2022	14.10.2022
Module 1	Collecting the dataset from the Internet	15.10.2022	05.11.2022
Module 2	Data cleaning	06.11.2022	06.12.2022
Module 3	Exploratory Data Analysis	07.12.2022	23.12.2022
Module 4	Data Visualization	24.12.2022	04.01.2023
Module 5	Writing research paper	05.01.2023	19.01.2023