

## **Preface**

The real-world situation necessitates the use of time series analysis, modelling, and forecasting. In this project, I performed modelling and forecasting of rose wine sales. To begin, determine whether datasets are seasonal. after that, I perform one of the major parts, which is to fill the missing values in the time series data using various imputation methods. Our goal is to run a variety of time series models, compare them, and determine which model is best for forecasting future sales. I'll start by determining whether or not the dataset is stationary. If it does not follow stationarity, then how to do the dataset stationary, all this discuss in this project. After that, I find out the ACF and PACF of data on the basis of that I was able to build different time series models. The performance of models is compared using the root mean square error (RMSE) values. and Based on the overall model evaluation and comparison, Triple Exponential Smoothing (Holt Winter's) is selected for final prediction into 12 months in future.