Forecasting passenger demand for revenue management by example of flight LO8178 operated by Nordica

This thesis researches demand forecasting for revenue management for an airline with limited historical booking data. Revenue management is essential for any company that has perishable inventory that could be sold to different customers at different price levels. Reliable and accurate forecasts are vital to any revenue management system. In this thesis, first revenue management controls are examined, then available booking data is analysed. Different forecasting methods are investigated and three models are selected for forecasting. Using MSE, ME and MAPE to determine forecast quality, multiplicative smoothing with trend and seasonality outperformed Holt-Winters method and SARIMA models.

Keywords: aviation, revenue management, fare products, inventory control, demand forecasting, Holt-Winters method, SARIMA models.

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