

ABSTRACT

The dynamic airport business dynamics require Angkasa Pura II to always improve itself to ensure that all airports managed by Angkasa Pura II are ready and able to go further in the competition for airport services globally. Along with the rapid growth of the air transportation industry in Indonesia, Angkasa Pura II is committed to improving services and the best infrastructure for airport service users.

Angkasa Pura II has made efforts to digitize intermodal transportation integration with the implementation of the Bus Management System. However, transaction data generated by the system has not been utilized properly, especially in the context of determining seat availability planning policies. Coupled with the unavailability of the load factor analysis is an obstacle in carrying out such planning.

Based on data from the Bus Management System, two variables can be used as independent variables to calculate the load factor, namely, the total number of passengers boarding a bus and the total availability of seats based on the movement of the bus out of the airport and the seating capacity of each bus used. This research will use the Monte Carlo simulation method in creating an ideal load factor model in the future.

Load Factor can be optimized using the data analytics approach through the monte carlo simulation method. Based on the simulation results that have been carried out in this study, it can be seen that the prediction model achieved has similarities in the demand movement trend pattern between historical data records and simulation data. Based on the predicted value of the resulting demand, it can be done to plan the availability of seats following the predicted demand so that the load factor to be achieved can reach the optimal percentage.

Keywords: intermodal transportation, load factor, monte carlo simulation, seat availability