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Thème

Implementation of a system for calculating and predicting the
turnover of the flights for « Air Algérie »

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Abstract

The airline industry is a very risky business especially for airline companies, it's investment is considerable, we can estimate a turnover of hundreds of millions of euros for a small airline company, however it's profit margin is really small. Therefore, every decision has its impact and each scheduled flight must be profitable in order to ensure the survival of the company.

Faced with these situations, and taking into account the fact that the low cost companies have increased their share in the market, the decision makers of the national airline company « Air Algérie » are forced to develop strategies allowing them to stay flexible about their scheduled flights, and be able to provide a possible cancellation of flights that will not be profitable.

Today, the national airline company and specially the prospective and development department consider that the established model is not suitable from many perspective and relative to some criteria, therefore they want first to develop a program which calculate the fare of the coupon of flight which is not currently available, then generate a clean data set and finally work on a new model of prediction, which take on consideration some local circumstances, and satisfy the expectations of the rulers.

The objective of this final year project is to concept and propose a system for calculating the revenue of flight using the coupons fare and also establish a prediction model of the turnover of a regular flight, based on the ticketing sales and the historic turnover of the flight. It also includes the visualization of some statistical and machine learning performance on one side, and on the other side, the evaluation of the results by the prospective and development department using the different key performance indicators.