Developing Flight Delay Prediction Model Using Machine Learning

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<u>Solution Fit Template</u>

1.Customer Segment	6.Customer Limitation	5. Available Solutions
Flight delays are gradually increasing and bring more financial difficulties and customer dissatisfaction to airline companies. To resolve this situation, supervised machine learning models were implemented to predict flight delays.	The results show that adverse weather conditions, low ceilings, and low visibility conditions strongly influence flight delays. Similarly, Asfe et al. Investigated the major causal factors of flight delays by ranking different factors using the analytical hierarchical process.	The available models would just state the reason for the delay along with the updated time of arrival and departure.

2. Jobs-to-be-done/Problems	9.Problem root/Cause	7. Behavior
Flight delays making it difficult for the passengers and causing financial losses, the dissatisfaction of passengers, time losses, loss of reputation and bad business relations.	Flight delay prediction problems can be treated by Different point of view: (i) delay propagation, (ii) root delay and cancellation. In delay propagation, one studies how delay propagates through the network of the transportation system .On the other hand, considering that new problems may happen eventually, it is also important to predict further delays and understand their causes.	Match the flight details with the scheduled flights or enter the flight details then check the time of scheduled arrival and departure and if the flight is delayed then find the updated time of arrival and departure and reason for the delay. The passenger can also check the availability of backup flights in case of long delays.

3.Triggers to Act	10.Your Solution	8.Channels of Behavior
The main public datasets and the papers analyzed, we have organized them main commonly attributes used into seven classes depicted in the data model . They abstract the main input attributes for delay prediction models.	This context, researchers created Fight delay models for delay prediction over the last years, and this work contributes with an analysis of these models from a Data Science perspective. We developed a taxonomy scheme and it can be classified models with respect to detailed components.	A typical operation of a commercial Fight. Stages can take place at terminal boundaries, airports, runways, and airspace, being susceptible to different kinds of delays. Some examples include mechanical problems, weather conditions, ground delays, air traffic control, runway queues and capacity constraints.
4. Emotions		
Due to delays in flights the entire plan of the passengers would be collapsed but with the predictions of flight delay the passengers can manage their time in an efficient and effective way.		