Project Title: Developing a Flight Delay Prediction Model using Machine Learning

Project Design Phase-I - Solution Fit Template

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Define CS, fit into CC

Explore AS, differentiate

1. CUSTOMER SEGMENT(S) — CS

Marketing executives and Business enthusiasts are the regular flight users. They face a problem of missing their flight due to an inaccurate prediction of arrival and delay. Patients who have to fly for their treatment suffers due to flight delay.

6. CUSTOMER CONSTRAINTS — CC

Flight delay is inevitable and it plays an important role in both profits and loss of the airlines. This project proposes a model for predicting flight delay based on Decision tree algorithm. DT is one of the best methods employed in solving problems with high level of complexity and massive amount of data

5.. AVAILABLE SOLUTIONS — AS

Instead of linear regression prediction model, we use decision tree Algorithm.
Merits: Everyone can understand the algorithm easily.
Demerits: It has a lesser efficiency.

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

The impact of flight delay can be a risk and this risk represents financial losses, the dissatisfaction of passengers, time losses, loss of reputation and bad business relations. If an airline doesn't deal with this problem immediately, it will cause other problems.

9. PROBLEM ROOT CAUSE — RC

- Improper documentation
- Incharges without training
- poor management committee.

7. BEHAVIOUR — BE

Passenger is in either very happy about the prediction or extremely dissatisfied by it based on its accuracy at each time.

Focus on J&P, tap into BE, understand RC

3. TRIGGERS — TR

Extreme Weather, Late Arriving Aircraft, Waiting for Connecting Passengers or Connecting Bags, Mechanical Delays or etc are the reasons why passengers face flight delays. It's important to notify the passengers whether their flight is delayed or not, which can give them some flexibility into their schedule.

4. EMOTIONS: BEFORE / AFTER — EM

Many reasons may directly affect the airline services by means of flight delays. To solve this issue, accurately predicting these flight delays allows passengers to be well prepared for the deterrent caused to their journey and enables airlines to respond to the potential causes of the flight delays in advance to diminish the negative impact. So here we propose a flight delay prediction model to predict if a flight will be delayed or not before it is even announced on the departure.

10. YOUR SOLUTION — SL

Data science based flight delay prediction uses gradient boosting algorithm is better and faster algorithm.Further flight can be predicted.The prediction can be commonly found in web application using machine learning

8. CHANNELS of BEHAVIOR — CH

8.1 ONLINE
We notify the information about the flight in a web application.

8.2 OFFLINE
You are offline in application show last information about the flight