

Project Design Phase-I

Problem – Solution Fit Template

Date	19 September 2022
Team ID	PNT2022TMID15570
Project Name	Developing a flight delay prediction Model using machine learning
Maximum Marks	2 Marks

Problem – Solution Fit Template:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why

Purpose:

- ☐ Solve complex problems in a way that fits the state of your customers.
- ☐ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ **Understand the existing situation in order to improve it for your target group.**

Problem-Solution fit canvas 2.0

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Passenger groups (business people, tourists, civilians) who often travel in flights for their personal and professional works.	6. CUSTOMER CONSTRAINTS CC Awareness about such apps which can help them overcome situation like unexpected flight delays. A person needs to be socially active to know about such apps. People need to be technologically updated in order to use such handy and beneficial apps which makes their lives even more easier.	5. AVAILABLE SOLUTIONS AS In case of delay a passenger can look for availability of any other connecting flight and continue their journey instead waiting for the delayed flight. If not they have to kill their time waiting in airport which is too annoying for very passenger. Last but not the least, the best solution in case of delay is to use the app which can notify the customer about the delays in prior.	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS J&P There are massive flight delays on the grounds and in air due to which the passengers face lots of consequences. It is also responsible for large economic and environmental losses.	9. PROBLEM ROOT CAUSE RC Flight delay may occur due to technical malfunctions, late arrival, thunderstorm, other extraordinary circumstances.	7. BEHAVIOUR BE The passenger should make themselves aware of some handy and beneficial apps which can help them overcome their issue. They should know about the app its purpose and use and they should be familiar in making use of it in appropriate way.	
Identify strong TR & EM	3. TRIGGERS TR The disappointment they face during their flight delays. The long waiting hours and the inconvenience they face during the time triggers them to find some solution for the issue.	10. YOUR SOLUTION SL Using a machine learning model, we can predict flight arrival delays. The input to our algorithm is given. We then use a decision tree classifier to accurately predict if the flight arrival will be delayed or not. Using this information through our app the passengers are highly benefited by knowing their flight delay in prior without any unnecessary waits. In this way it improves our customer satisfaction by helping them lead a peaceful journey.	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE They can get social through social platforms informing about the delay. They can claim compensation for the delay and advertise and suggest people to use our app.	Extract online & offline CH of BE
	4. EMOTIONS: BEFORE / AFTER EM At first during the problem they feel frustrated, anxious, disappointed and nervous. There may be thoughts that make them overthink about their situation. But then later when the problem is fixed they might feel thankful, relaxed and happy.		8.2 OFFLINE The passenger can report to airport on time after flight arrives during delay. They can inform their family and taxi person about their delay.	



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