**Project Proposal**

1. **Title of the Project: Dynamic Pricing for Airlines Industry**
2. **Brief on the project:** The airline, as part of its marketing strategy, has implemented a new Revenue Management (RM) System to support real time dynamic pricing. The underlying software is a third party proprietary application and not accessible to the user. What *is* accessible though, are the feeds from Reservation System(RES) into the RM and also the output in form of controlled (demand based) availability

The objective of the proposed project is to independently build a parallel statistical model that will forecast the reservation demand and propose controlled availability to achieve the existing revenue level at current pricing structure

Reservation system provides a feed to Revenue Management system once every day (see attached document). This includes ‘nested availability count’ used vs ‘cumulative booking achieved against respective classes’ up to date for 1500-odd flights for next 356 days with current date as ‘0’. The data is in form of a tape that’s overwritten every day on the mainframe computer and is available to view to the development team who developed the data feeds.

Attached Excel Sheet shows a summarized and modified snapshot of the feeds for one international flight for next 37 days. similar data will be collected for a strategic selection of flights (CA-US trans-border and international). This data will be classified and analyzed based on market parameters that are known to influence demand. Essentially this is with a view to independently forecast the behavior which is verifiable with the working Revenue Management predictions.

1. **Deliverables of the project:** software that will predict the correlation between demand and availability and achieve current revenue levels or better
2. **Resources:** BookingData available on the reservation system for a selected flight for a selected duration.
3. **Team Members:**  **Self**
4. **Milestones with timeline**

|  |  |  |  |
| --- | --- | --- | --- |
| **Milestones** | **Start date** | **Finish date** | **Grading Grading** |
| 1. **Define a problem** | **30Apr** | **15 May** | **5%** |
| 1. **Get the Data** | **2May** | **31May** | **5%** |
| 1. **Explore and pre-process data** | **2May** | **30June** | **10%** |
| 1. **Create Features** | **15May** | **31jul** | **5%** |
|  |  |  | **55%** |
| 1. **Deploy & consume model** | **15May** | **15Aug** | **20%** |
| 1. **Report Writing** | **15 Aug** | **31Aug** | **10%** |
| 1. **Project submission** | **NA** | **31Aug** | **15%** |
| 1. **Final presentation with project/ product demonstration** | **NA** | **17Sep** | **20%** |
| 1. **Blog publishing (this will not be done within this nda)** | **15Aug** | **17Sep** | **5%** |

1. **Technical architecture**

**{GDS}**

**{AGENT}** -------> Ticket -------> **Reservation**  < ------ Masked Availability <------ **Revenue**

**{WEB}** Booking **System** Fare Quote **Manager** ------> Daily feed of Sale data --------->

GDS, Web, Agent, Call Centers

Reservation Application

ANALYTICS

O&D

Cust Ap

Pricing Appln

Accept / Reject

RESP

Booking

Request

Evaluation

