Capstone Project Submission

Team Member's Name, Email and Contribution:
Annayan Bose (annayanbose@gmail.com) Contribution-. Analysis of important key columns and deriving the insights based on account length, state, add-on services such as international plan, vmail plan and customer service calls. Textual and pictorial representation are result of his analysis. Prabhat Patel (prabhatpatel51@gmail.com) Contribution-. Analyzing and adding the new key attributes from the given dataset. Observing the associations of daytime calling, charges and churn. Visualizing observations in the graphical representation and describing the distribution of variables are result of his analysis.
Please paste the GitHub Repo link.
Github Link:- https://github.com/prabhat7777/Data_science_capstone_projects.git
Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)

PROBLEM STATEMENT

A French international telecommunications company, Orange S.A., was once known as France Telecom S.A. The cleansed customer activity data (features) in Orange Telecom's Churn Dataset are combined with a churn label that indicates if a customer has terminated their subscription. Our aim is to investigate and examine the data to identify the main causes of customer attrition and suggest solutions or ideas to ensure customer retention.

APPROACH

Exploratory Data Analysis:-

We used Python to do exploratory data analysis in order to gain insights from the data and note the following:

- Different features and their contribution to the problem statement.
- Whether the null values are present or not.
- What all features that can be added or removed according to their usefulness.
- Whether or not the dataset contains any outliers.
- The features that have a greater impact on the turnover rate.

Insights:-

1. The customers that terminate their accounts and lead to churn.
2. The state with the most, least subscribers and their respective churning rate.
3. Maximum number of days most of the subscribers getting retained.
4. Unsatisfactory customer assistance of Orange telecom services.
5. Pattern in day, eve, night calls and charges associated with churning.
6. Add-on services quality and benchmark.

Conclusions:-

1. The area code field is anomalous and can be omitted.
2. Maximum numbers of subscribers account lies in between 90-120 days. After that account length increases but number of subscribers decreases.
3. After analyzing the dataset we can say that customer those who are getting churned have:
   - High "Total day charge"
   - Customers with International plan
4. Customers with Voicemail plans tend to churn less frequently.
5. Orange's International plan needs improvement in respective aspects associated with it.
6. More (>4) customer service calls clearly leads to more churning.
7. In CA Orange telecom has the least number of subscribers but still has a very high churning rate.