**Capstone Project Submission**

**Instructions:**

i) Please fill in all the required information.

ii) Avoid grammatical errors.

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| **Please paste the GitHub Repo link.** |
| GitHub Link:- <https://github.com/CoderPranavRaj/Telecom-churn-analysis>  :-https://github.com/prathamesh122/telecom-churn-analysis |
| **Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words)** |
| **In the telecom churn analysis, we have 51 states and 3 Area codes. In this EDA capstone project, we were provided various data sets like ('State', 'Account length', 'Area code', 'International plan',**  **'Voice mail plan', 'Number email messages', 'Total day minutes',**  **'Total day calls', 'Total day charge', 'Total eve minutes',**  **'Total eve calls', 'Total eve charge', 'Total night minutes',**  **'Total night calls', 'Total night charge', 'Total intl minutes',**  **'Total intl calls', 'Total intl charge', 'Customer service calls',**  **As the first step, perform data wrangling over raw data. We divided the project into seven parts i.e 1. the churn column-wise analysis 2. the state-wise, and 3. Area code-wise,4. International plan-wise, 5. customer service calls-wise, and 6. Total day, night, and evening calls, and Total day, evening, and night call charges.**  **In the churn-wise analysis, after analyzing the churn column, we can say that almost 15% of customers have churned. Now let's see how other features of our data are related to churn.**  **In the state-wise analysis,** **After Analyzing the state column, we can say that CA, NJ, TX, MD, SC, and MI states have the most churn rate of more than 21.**  **The reason for this churn rate from a particular state can be due to the low coverage of the cellular network.**    **In the ‘Area code’ analysis, In the data, we can see there is only 3 common area code, and their churn rate is almost the same. we don't think there is any relation between area code and churn due to the customer leaving the operator.**  **In the ‘International plane’ analysis, as a conclusion from this analysis, we can see that the number of customers with international plans is 325, however, when 137 of those customers cancel the service, the churn rate is very high at 42.4148614%. Maybe this is the reason why customers leave the service.**  **In the ‘customer service calls’ analysis, it is observed from the analysis that, mostly because of bad customer service, people tend to leave the operator.**  **The data indicates that for those customers who called the service center 5 times or above the customer churn percentage is higher than 60%, And customers who have called once also have a high churn rate indicating their issue was not solved in the first attempt. So, the operator should work to improve the service call.**  **In Total day, evening, and night calls and their charges analysis, if we try to understand the graphs the x-axis is the total charges and the y-axis is the number of calls during each time of the day. Comparing the charges for calls during the day, evening, and night it can be observed that the charges for calls during the day are very high followed by evening and night. The average rate at which customers are placing calls during the day ranges between 20 - 40, for the evening it is approx. 15 - 19 and for the night is 5.5 - 11.**  **The rates might be one of the possible reasons for customer churn or let's due to which the customers might opt for companies that offer the same service at a cheaper rate.**  **If the company already has a wide range of plans then it might be another possibility that the customers are not aware of those plans.** |