Team Earthquake

SPJIMR

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Kapil Desai, Shashank Mishra,
Sourav Panigrahi

Techtonic Shift

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Pre-Analysis Data Cleansing:

Initially, we glanced through the data to find any missing points. We saw that **11 data points** had total charges column **blank**. This meant that either they have not been billed yet or have just subscribed. Owing to this reason, we decided to **remove** them from our analysis.

Analysing Churning pattern:

We used tableau to draw inference between churning pattern and various parameters being **Demographics** (gender, partner and dependent, senior citizen); **Services** (Internet Service, Phone Service, Multiple lines, Online Backup, Online Security, Tech Support, Streaming Movies and Streaming TV) and **Billing** (Contract, Monthly Charges, Total Charges, Tenure, Paperless Billing and Payment Method). We observed a general trend across these patterns and how churning was affected due to variations in these.

We finally created dashboards indicating churning pattern due to variation in demographics, paperless billing, contract type, internet service, online service analysis, monthly charges, total charges, streaming movies and streaming TV service and Tenure. After analysing the pattern, we have created a story board.

Analysis

1) There is approximately **equal churning across gender**. When further broken down into senior citizens, the data indicated the same. When a customer has dependents or a partner, they churn lesser as compared to those not having dependents or a partner
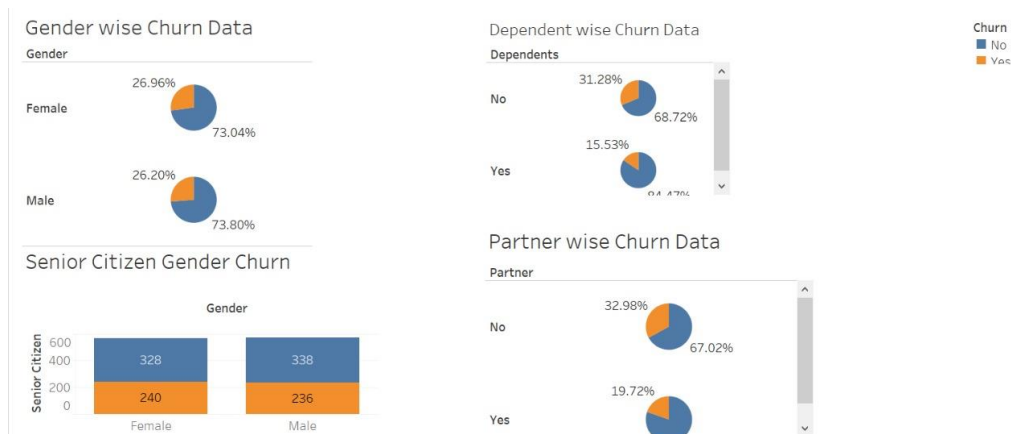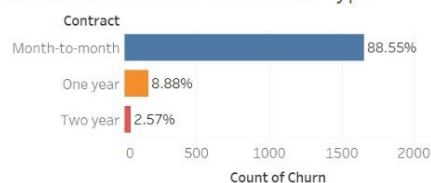

2) About **75% of customers who used paperless billing tend to unsubscribe to the services of Client**. When analysed along with the mode of payment, **62%** of churned customers were making payments through **electronic checks**.
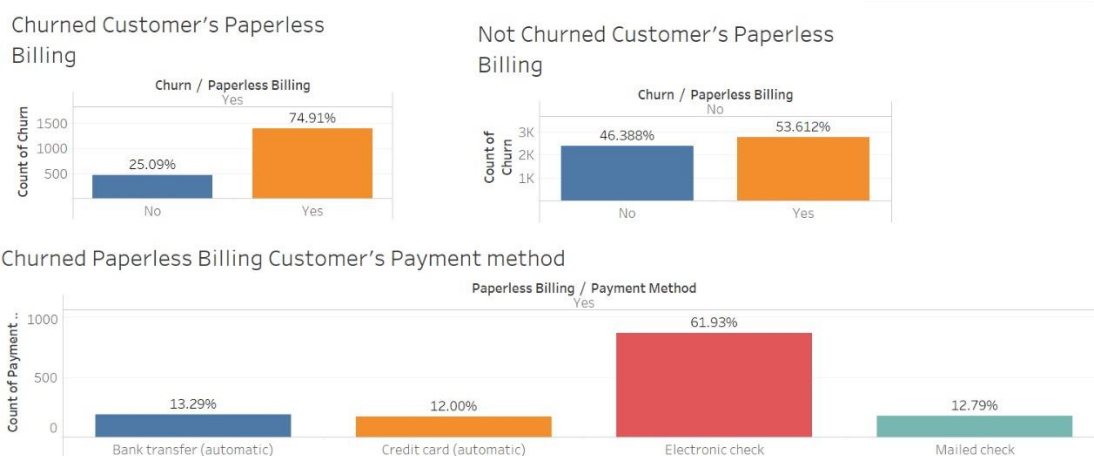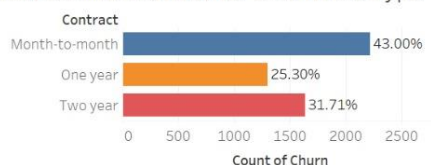
3) **88%** of the churned customers had a **month-to-month contract**. Adding to it, those having monthly charges more than Rs.66 tend to churn more.
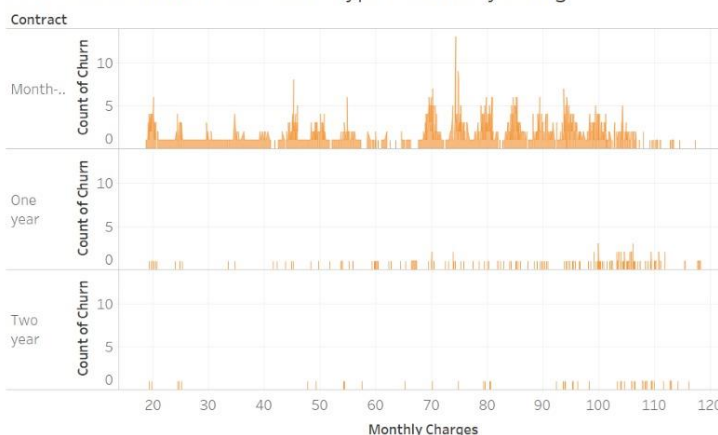

Churned Customer's contract type

Churned Customer's Contract Type & Monthly Charge
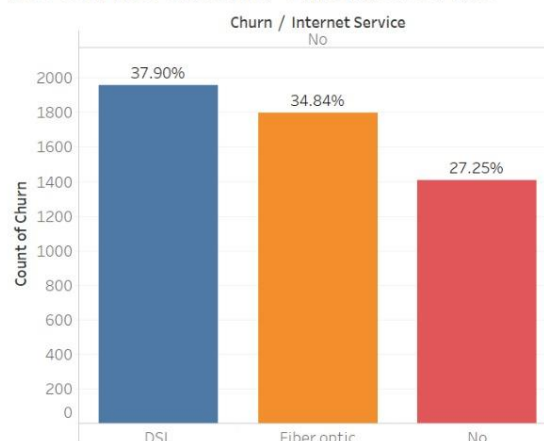
Not Churned Customer's Contract Type

4) **25%** of the customers using only **internet services** (not using phone services) tend to unsubscribe in contrast to a **meagre 7%** for customers only using **phone services**. To investigate further, we performed analysis on only internet service users.

Churned Customer's Internet Services
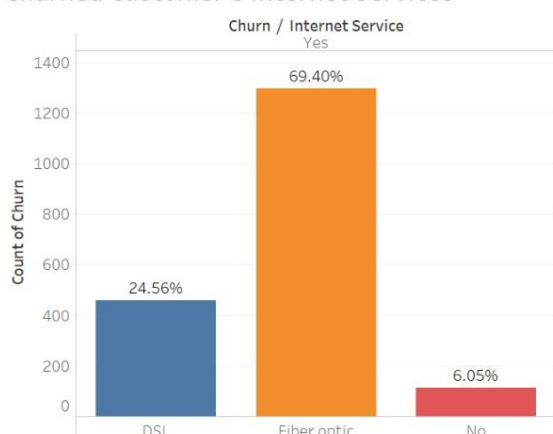
Not Churned Customer's Internet Service

5) **69% of churned internet service** users were those using **fibre optics**. On further analysis of churned fibre optics users, we found that **53% did not have online backup, online security and tech support.**
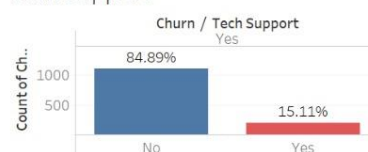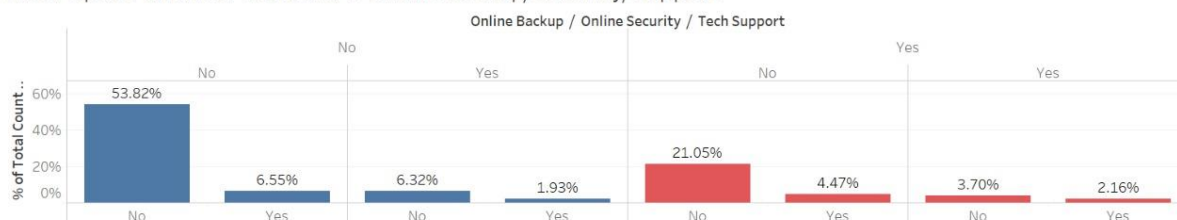

Fiber Optics Churned Customer's Online Backup

Fibre Optics Churned Customer's Online Security
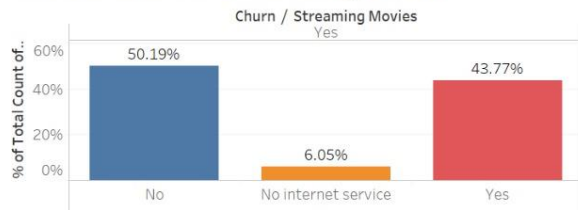
Fiber Optics Churned Customer's Tech Support

Fiber Optics Churned Customer's Online Backup/Security/Support

6) Streaming **movies** and streaming **TV** services do **not** have an **impact** on customer **churn rate** but we could see lower churn rate of users not using internet services.
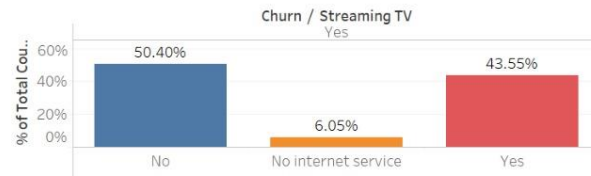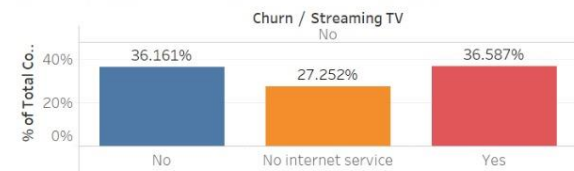
Churned Customer's Streaming Movies

Churn / Streaming Movies
Yes

Not Churned Customer's Streaming Movies

Churn / Streaming Movies
No

Churned Customer's Streaming TV
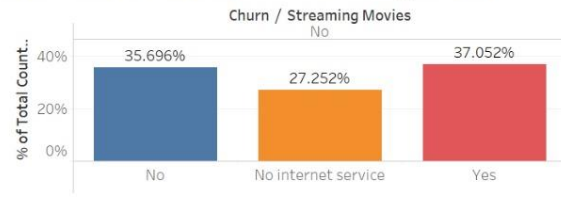
Churn / Streaming TV
Yes

Not Churned Customer's Streaming TV
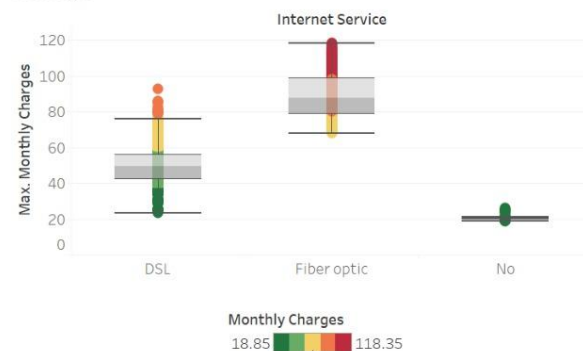
Churn / Streaming TV
No

7) Analysing churned customers among internet service users on basis of monthly charges, we found that **charges for fibre optics** were **higher** than the mean of DSL charges.

Churned Customer's Internet Service & Monthly Charge

Internet Service

Monthly Charges
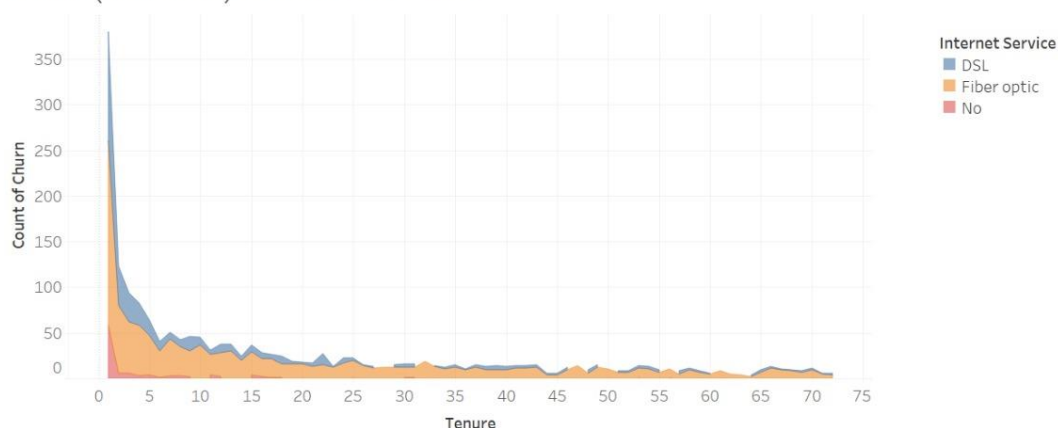18.85 — 118.35

Churned Customer's Internet Service & Total Charge

Internet Service

Total Charges
19 — 8,685
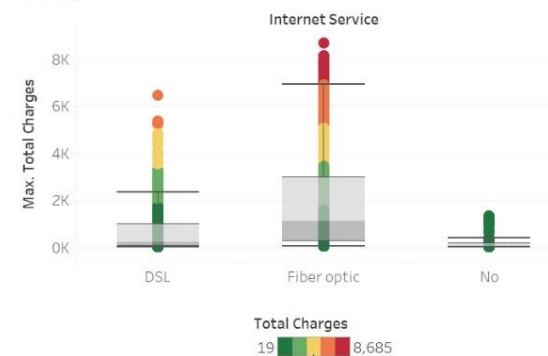
8) Analysing churn pattern on tenure, it was clearly visible that **longer the tenure lesser the churning**. Customers, who have been subscribers for 5 months or more showed lesser churning

Tenure (in months) vs Number of Churns

Internet Service
- DSL
- Fiber optic
- No

Recommendation

1) Churning is **independent** of **gender and senior citizens.** The company should **focus on family plans** and plans including **partners** to reduce churning.

2) Paperless billing is probably creating some issues for the customers. Moving further, Electronic Checks and Mailed Checks combined with paperless billing are leading to high churning. Client should **shift** these customers **to the automatic payment modes** where churning is low.

3) Client can try to lure the customers to opt for yearly contracts. It can also try to offer discounts to monthly contract customers to increase retention.

4) **Client has loyalty among customers who use only phone services**. It can leverage on this target group to create a loyal base.

5) Client should focus on providing **online backup, online security, and tech support**. Lack of these services has contributed to churning of customers.

6) If these **streaming services** are not optional in nature, they can be made **optional** to reduce tariffs. This would help in retaining customers.

7) **Revision of tariff plans for fibre optics** should be considered to lower the churn rate among those opting for fibre optics.

8) Client should **focus** on retaining customers for **at least 5 months** from the initial subscription to reduce churning by giving **bundled plans or discount offers**.

Conclusion:

The above recommendations can be implemented by Client in order to reduce customer churn rate to bolster their growth.