

Intelligent Customer Retention: Using Machine Learning for Enhanced Prediction of Telecom Customer Churn

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INTRODUCTION

Overview

- Customer churn is often referred to as customer attrition, or customer defection which is the rate at which the customers are lost
- Customer churn is a major problem and one of the most important concerns for large companies
- Customer churn has become highly important for companies because of increasing competition among companies
- Increased importance of marketing strategies and conscious in recent years

Purpose

- "Gather data: Telecom companies already have access to a vast amount of data, including customer demographics, usage patterns, and call history. This data can be combined with external data sources such as social media activity, online browsing history, and customer feedback to build a more comprehensive picture of each customer.
- Prepare and preprocess data: The data must be prepared and preprocessed to ensure that it is clean and in the correct format for analysis. This process may include removing duplicates, filling in missing data, and transforming data into numerical or categorical variables that can be used for machine learning algorithms.

PROBLEM DEFINITION & DEFINE THINKING

Empathy Map

- Customer Empathy Map is an amazing resource that helps companies achieve greater control in customer service.
- They can be used on its own or in combination with other CX devices, including customer journey maps, customer persona, service blueprints, motivation matrix, and mind maps.



Empathy map canvas

Telecom customers who have subscribed to out services. Customers who have been with us for a while but might be considering switching to another provider. Customers who have already churned and might be potential targets for win-back campaigns.



Share template feedback



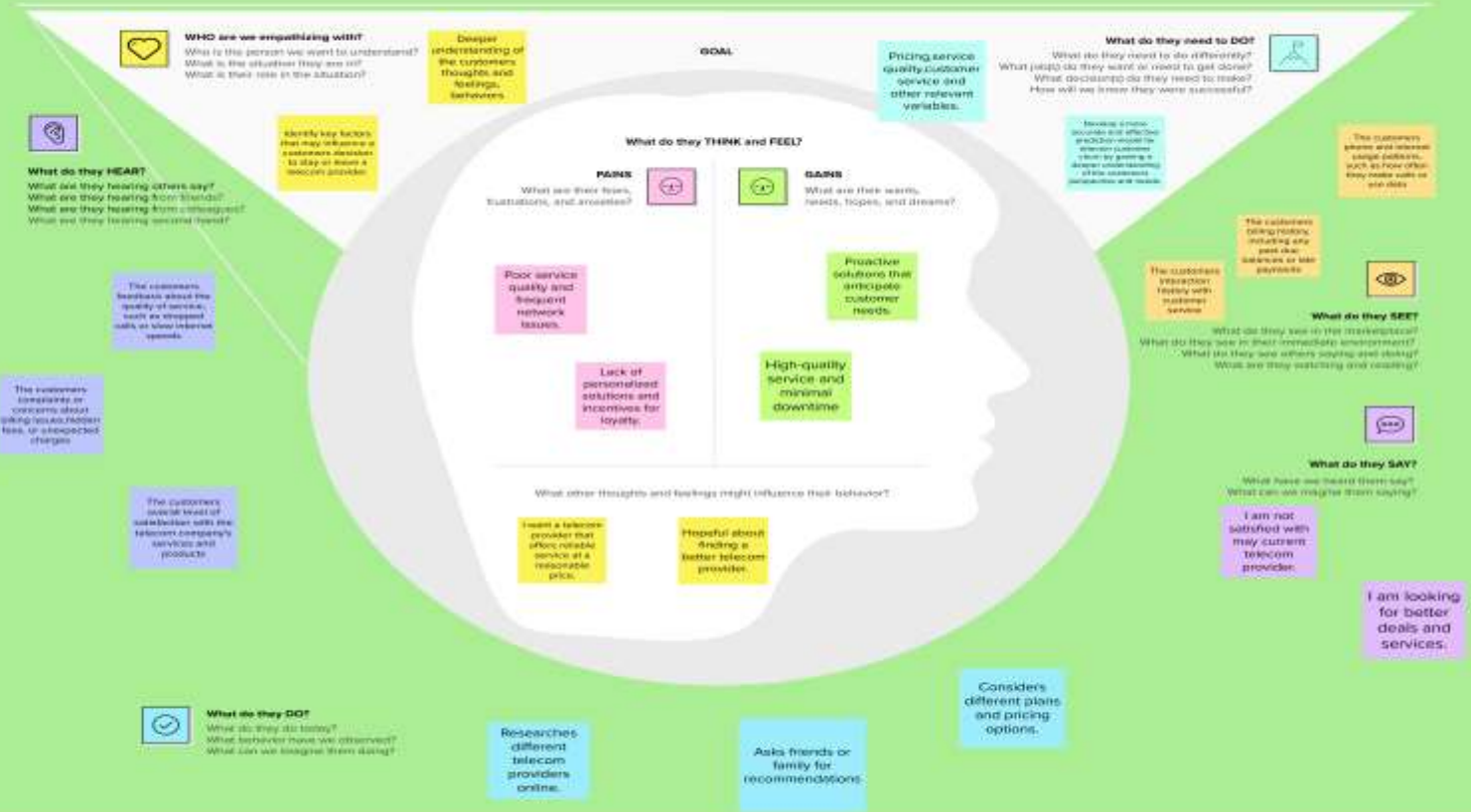
Need some inspiration?

See 5 example canvas of the workspace. Select your work.

Share examples

Develop shared understanding and empathy

Summarize the data you have gathered related to the people that are impacted by your work. It will help you generate ideas, prioritize features, or discuss decisions.



- **Ideation & Brainstorming Map**

One of the primary reasons to create a mind map is to allow yourself and your team members to have a proper platform from which everyone can easily brainstorm different ideas

Creating such brainstorming mind maps helps companies or business owners note down all the important aspects of any meeting so they can easily execute it to see the results



Template



Intelligent Customer

1. Applying four classification algorithms.
2. KNN - nearest neighbor algorithm
3. SVM - Support vector algorithm
4. ANN - Artificial neural network
5. Random forest classifier algorithm
6. Literature survey

🕒 10 minutes

👤 1 hour to collaborator

👥 2-8 people recommended



Need some inspiration?

See a featured example of this template to refresh your ideas.

[Open example](#)

1

Before you collaborate

Customer churn rate indicates how many of your existing customers are not likely to make another purchase from your business.

📌 Task gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

📌 Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

📌 Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#)

Define your Problem

1. Customer churn is referred to as customer attrition, or customer defection which is the rate at which the customers are lost.
2. The main objective of intelligent customer retention problem is to predict potential of telecom customer churn.
3. This project will help the telecom company predict the number of customers that will leave the telecom service provider.
4. Customer churn has become highly important for companies because of increasing competition among companies.
5. To identify probable churn customer machine learning algorithm will be applied and the result will be predict.



Key rules of Brainstorming

To run an smooth and productive session

- 🚫 Stay on topic.
- 🚫 Discourage wild ideas.
- 🚫 Defer judgment.
- 🗣️ Listen to others.
- 🗣️ Go for volume.
- 👁️ Encourage be visual.

2

Brainstorm

Improve the customer experience and service quality

🕒 30 minutes

M.Priyatharshini

Identify customer	Identify	Identify
Identify		
Identify		

S.Poornima

Identify	Identify	Identify
Identify		
Identify		

P.Poornima

Identify	Identify	Identify
Identify		
Identify		

G.Pradeepa

Identify	Identify	Identify
Identify		
Identify		

Person 5

Person 6

Person 7

Person 8



+



3

Group ideas

1. Be proactive with communication.
2. User interacts with the UI to enter the input.
3. Entered input is analysed by the model which is integrated.
4. Once model analyses the input the prediction is showcased on the UI.
5. Offer incentives.

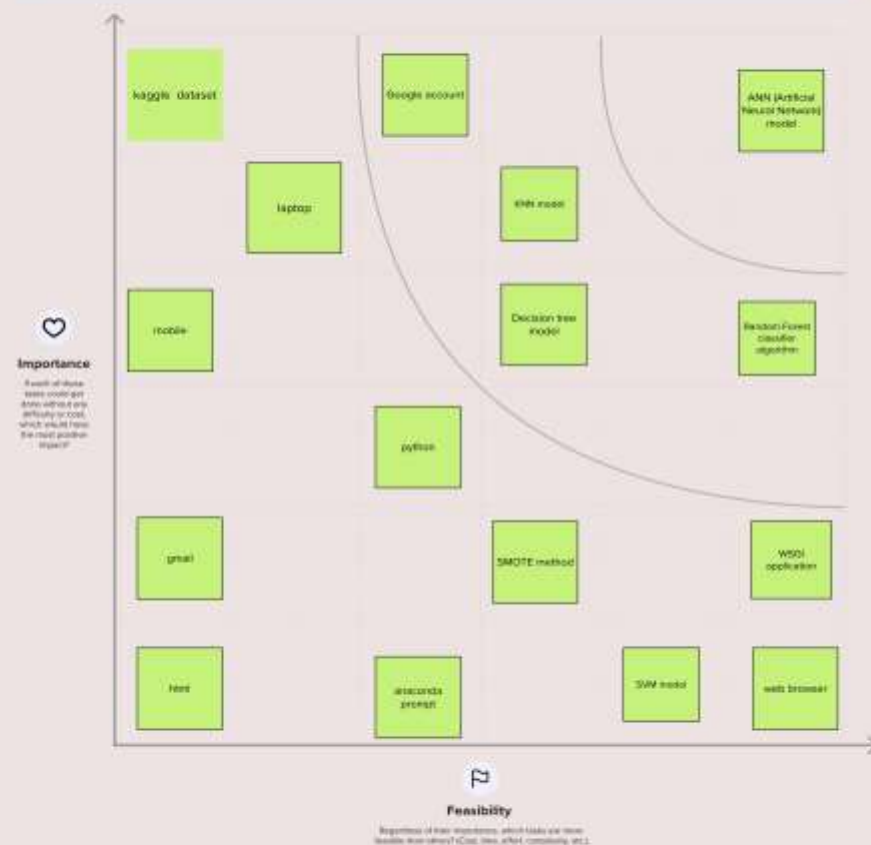


4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes



5

After you collaborate

We can export the mural as pdf to share. It is helpful to getting information.

Quick add-ons

1. **Share the mural**
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.
2. **Export the mural**
Export a copy of the mural as a PNG or PDF to attach to emails, include in decks, or save to your drive.

Keep moving forward

- Strategy blueprint**
Define the components of a new idea or strategy.
[Open the template](#)
- Customer experience journey map**
Understand customer needs, motivations, and obstacles for an experience.
[Open the template](#)
- Strengths, weaknesses, opportunities & threats**
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.
[Open the template](#)

2. [Share template feedback](#)



RESULT

TELECOM CUSTOMER CHURN PREDICTION

Customer churn has become highly important to companies because of increasing competition among companies, increased emphasis on marketing strategies and product differentiation of customers in the market place. Customers can easily find better alternative services. Companies must develop various strategies to prevent customer defections, depending on the services they provide. Strong identification of specific churn risk factors helps prevent churns that may be avoidable. An effective churn predictive model considers a variety of risk identification of customers likely to leave and help to reduce churn by implementing strategies. Customer retention campaigns might be linked to selected customers but instead focus on needs of the customer. Improved prediction of customer churns can help companies design strategies to reduce the churns and offer to enhance customer loyalty.



Check us in on our new website

PREDICTION FORM

Examine	Yes
Yes	Yes
0	Yes
No Place on the	0%
Yes	Yes
Yes	Yes
Yes	Yes
Identify Results	Yes
Book "Case/Document"	91.1
91.1	

TELECOM CUSTOMER CHURN PREDICTION



THE CHURN PREDICTION SAYS NO

TELECOM CUSTOMER CHURN PREDICTION



THE CHURN PREDICTION SAYS YES

ADVANTAGES

- **Cheaper than Acquisition:** Customer retention is five times more economical than the acquisition process and thereby a most cost-effective method of maintaining a customer base. Several kinds of research have been conducted in the past which has favored retention over the acquisition process.
- **Loyal customers are more forgiving:** Loyal customers are more forgiving and they support their brand even if they get a poor service experience. Business get better support from its customers in its hard times that ensure its long-term continuity.

DISADVANTAGES

- **Social Impact:** Proposed model can help improve the overall customer experience and service quality. Companies can also make better decisions about how to retain their customers.
- **Business Model/ Impact:** This product can generate revenue using a product based model, where the system can be sold as a product to the telecom companies. This product can also be used for subscription based model.

APPLICATIONS

- Allow App User segmentations
- Use in-App push notifications
- In-app referral
- Go for Smart Surveys
- Deliver Contents per location
- Incorporate Smart Analytics
- Smart Contracts
- Stir Loyalty
- Optimizing in-app journeys
- Incentivize with special features

CONCLUSION

- The customer retention system based on intelligence was introduced. The Machine Learning \Data Mining techniques provided a powerful tool to predict customer churn. By using the rules to predict customers churn, the system will help telecom companies understand customer churn risk and get the list of customers deserved to perform company's retention strategies. Overall, the system is helpful in customizing marketing communications and customer treatment programs to optimally time their marketing

FUTURE SCOPE

- The implementation of an intelligent customer retention system using machine learning for enhanced prediction of telecom customer churn can have a significant impact on reducing customer churn rates and improving overall customer satisfaction.
- By leveraging machine learning algorithms and analyzing customer data, telecom companies can accurately predict which customers are at risk of churning and take proactive measures to retain them. This can include targeted marketing campaigns, personalized offers, and improved customer service.