CUSTOMER CHURN PREDICTION

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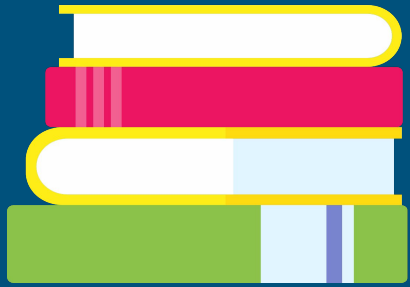

CUSTOMER CHURN PREDICTION:

- Customer Churn prediction means knowing which customers are likely to leave or unsubscribe from your service.
- For many companies, this is an important prediction.
- This is because acquiring new customers often costs more than retaining existing ones.

ABSTRACT:

Customer churn analysis is the process of predicting customers who tend to cancel the service (subscription) they receive for various reasons, especially in sectors such as telecommunications, finance and insurance, and determining the necessary operational steps to prevent this cancellation.

Idea: Customer Churn Prediction for a Subscription-Based Service

Objective:

Predict which customers of a subscription-based service are at risk of churning in the next month, allowing the company to take proactive measures to retain them.

Steps 1:

Data Collection:

- **Gather historical data about customer interactions and behaviors, including subscription start dates, usage patterns, customer support interactions, payment history, and any other relevant information.**

Data Preprocessing:

- **Clean and preprocess the data, handling missing values and outliers.**

Create relevant features such as customer tenure, monthly usage statistics, and customer satisfaction scores.

Steps 2:

Data Splitting:

- **Split the data into training and testing sets to evaluate model performance.**

Model Selection:

- **Choose a suitable machine learning model for binary classification, such as logistic regression, decision trees, or random forests.**

Model Training:

- **Train the selected model on the training dataset using the historical data to learn patterns associated with churn.**

Steps 3:

Model Evaluation:

- **Evaluate the model's performance on the testing dataset using appropriate metrics like accuracy, precision, recall, F1-score, and ROC-AUC.**

Hyperparameter Tuning:

- **Fine-tune the model's hyperparameters to optimize its performance.**

Real-time Predictions:

- **Deploy the trained model in a production environment where it can make real-time predictions based on incoming customer data.**

Steps 4:

Actionable Insights:

- Integrate the model's predictions into the company's workflow to identify customers at high risk of churning.
- Implement targeted retention strategies for these high-risk customers, such as personalized offers, discounts, or special promotions.

Monitoring and Iteration:

- Continuously monitor the model's performance in a real-world setting.
- Periodically retrain the model with updated data to adapt to changing customer behavior.

Feedback Loop:

- Incorporate feedback from retention efforts and customer outcomes back into the model to improve its accuracy and the effectiveness of churn prevention strategies.

THANKING YOU