Project Proposal: Predicting Telecom Customer Churn

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Domain: All businesses want to stay in business, and all businesses need customers that consume its products and services. According to research done by Bain & Company acquiring a new customer costs as much as 5 times as much as retaining an existing customer, and a 5% increase in customer retention can increase profits by up to 25%. Thus retaining current customers is highly advantageous for all businesses.

This project will examine a telecom company's customer churn and determine which supervised learning model best predicts whether or not a customer will leave the telecom company. A successful model could be used by telecom company's to help predict whether or not an existing customer will and churn and act proactively to retain the customer.

An MVP will model the existing dataset and make predictions about whether or not a customer will churn or not.

Data			
Variable	**Type**	**Description**	**Use for Model**
state	String	The state the customer lives in	Y
account length	Float	Length of time as a customer	Y
area code	Categorical	Area code of the customer	Y
international plan	Categorical	The customer has an international plan	Y
voice mail plan	Categorical	The customer has a voicemail plan	Y
number vmail messages	Float	The number of voicemail message	Y
total day minutes	Float	The number of day time minutes used	Y
total day calls	Int	The total number of day time calls made	Y

Data			
total day charge	Float	The total dollar amount charged for day time calls	Y
total eve minutes	Float	The number of evening time minutes used	Y
total eve calls	Int	The total number of evening time calls made	Y
total eve charge	Float	The total dollar amount charged for evening time calls	Y
total night minutes	Float	The number of night time minutes used	Y
total night calls	Int	The total number of night time calls made	Y
total night charge	Float	The total dollar amount charged for night time calls	Y
total intl minutes	Float	The number of international minutes used	Y
total intl calls	Int	The total number of international calls made	Y
total intl charge	Float	The total dollar amount charged for international calls	Y
customer service calls	Int	Number of calls to customer service	Y
churn	Categorical	Whether or not the customer left the company	N