Bivariate Analysis for Categorical-Categorical Variables

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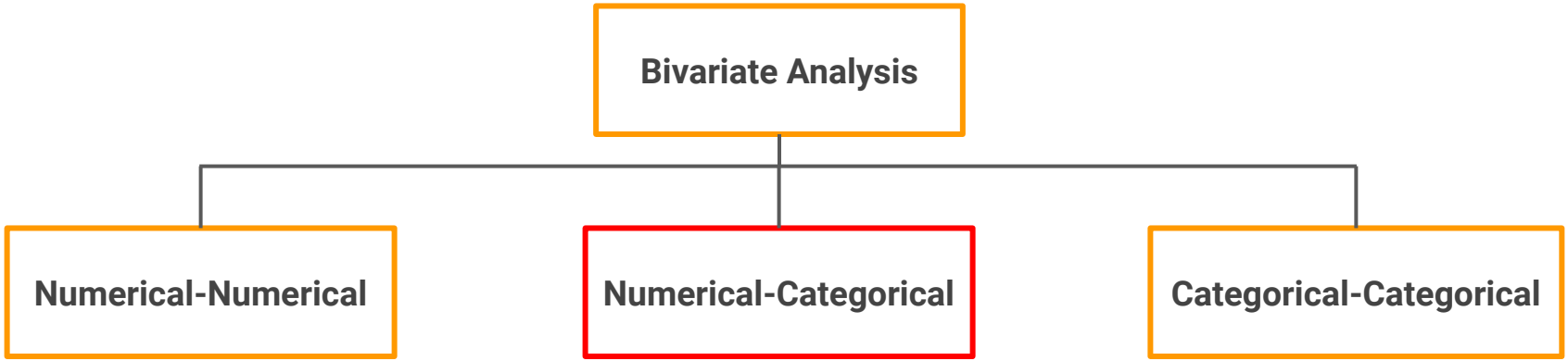
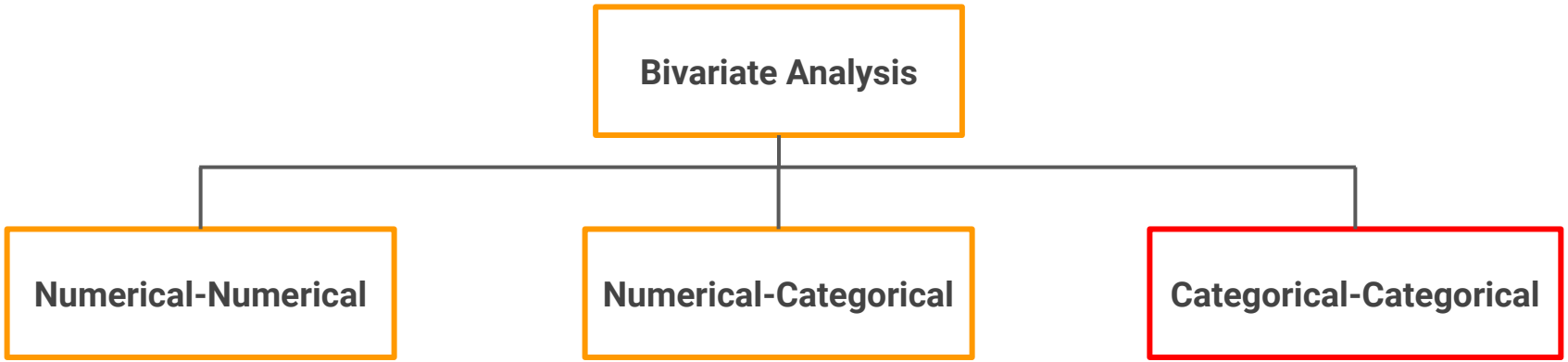
Introduction to Bivariate Analysis



Introduction to Bivariate Analysis



Cross Tab

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Cross Tab

	churn	not churn
age	mean_age of customers who churned	mean_age of customers who didn’t churn

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Cross Tab

	churn	not churn
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Cross Tab

	churn	not churn
age	mean_age of customers who churned	mean_age of customers who didn't churn

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Cross Tab

	churn	not churn
Male		
Female		

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Cross Tab

	churn	not churn
Male		
Female		

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Cross Tab

Number of of customers that satisfy both the conditions

	churn	not churn
Male		
Female		

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Cross Tab

Number of of customers that satisfy both the conditions

	churn	not churn
Male	Males who churned	
Female		

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Cross Tab

Number of of customers that satisfy both the conditions

	churn	not churn
Male	Males who churned	Males who did not churn
Female		

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Cross Tab

Number of of customers that satisfy both the conditions

	churn	not churn
Male	Males who churned	Males who did not churn
Female	Females who churned	Females who did not churn

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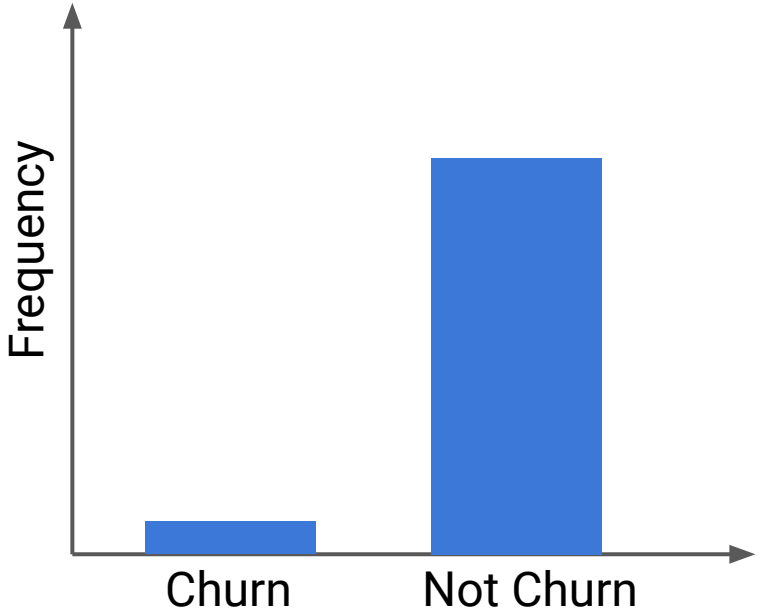
Categorical Bar Plots



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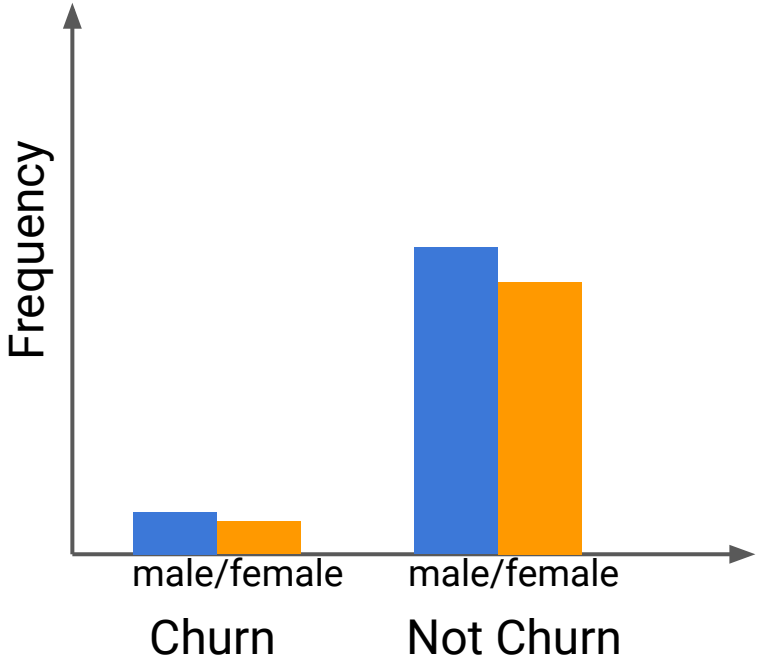
Grouped Bar Plots



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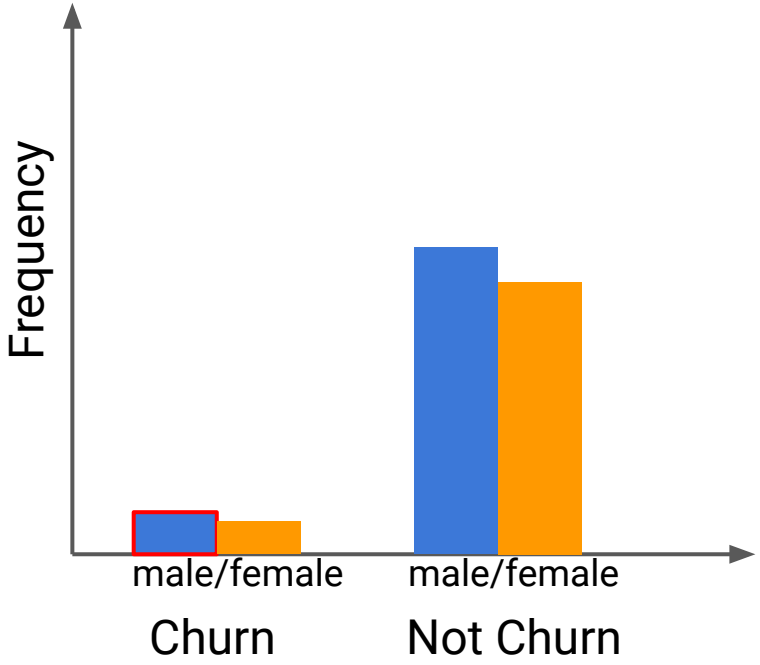
Grouped Bar Plots



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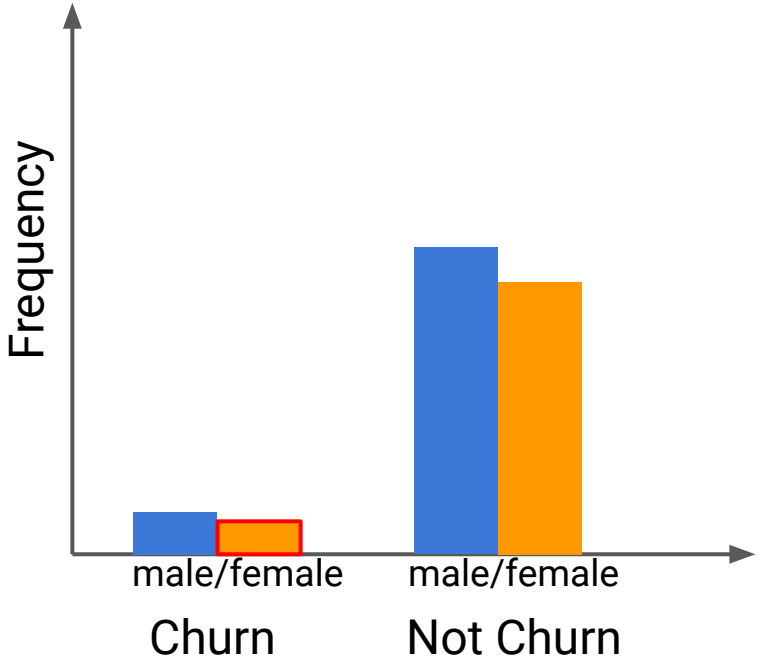
Grouped Bar Plots



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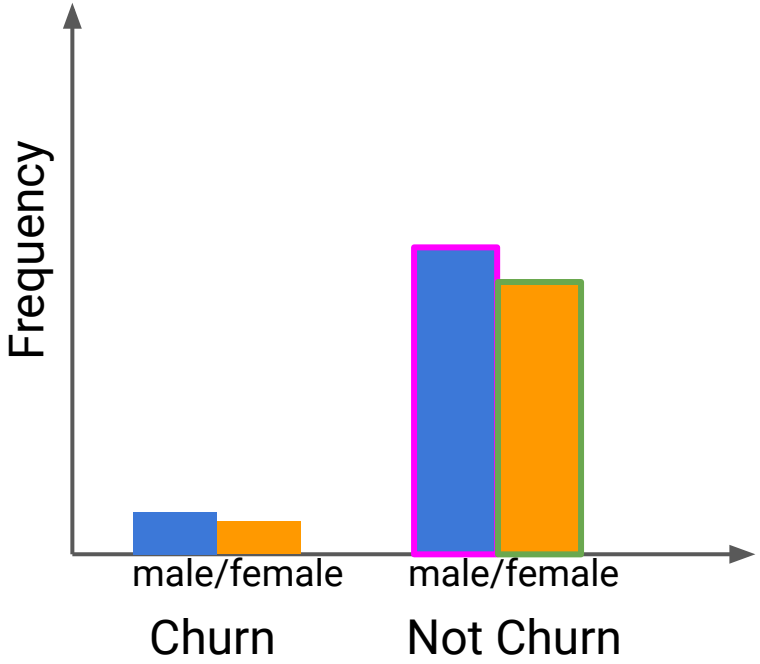
Grouped Bar Plots



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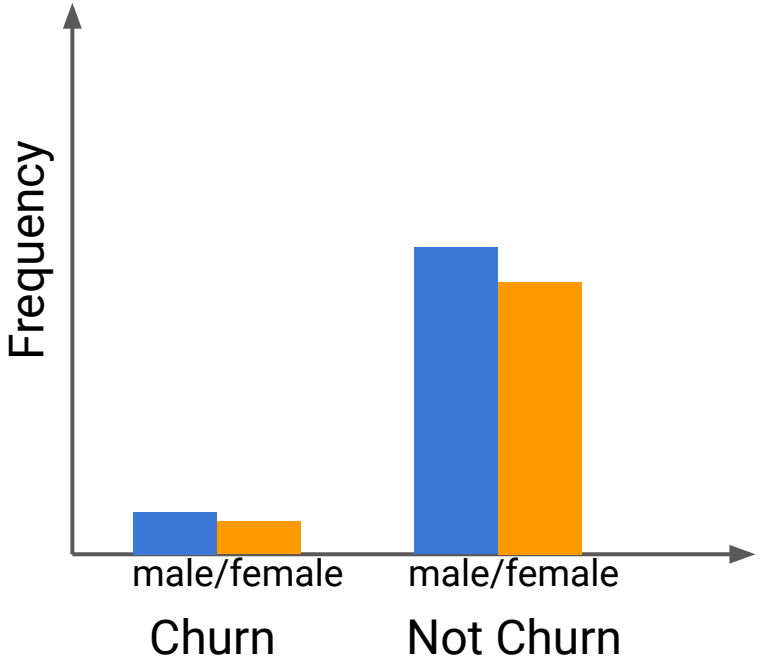
Grouped Bar Plots



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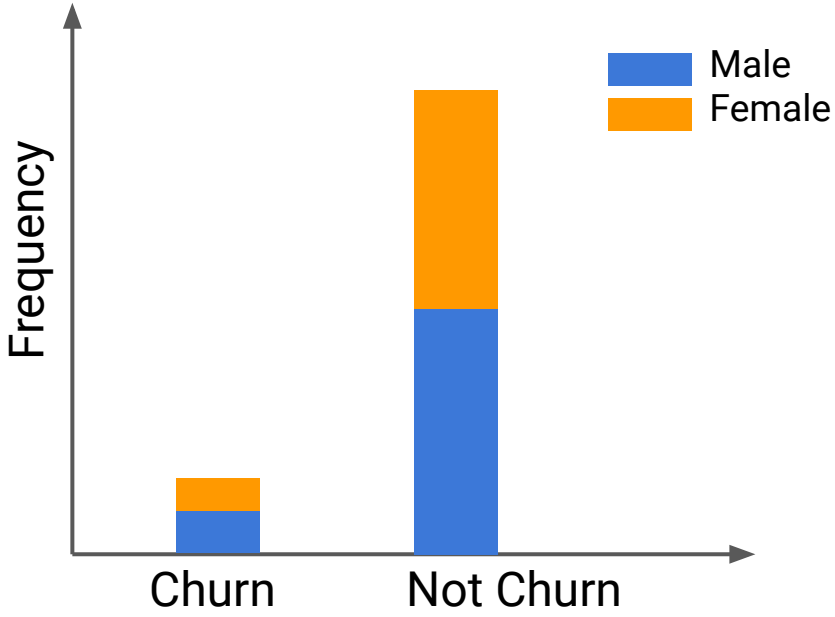
Stacked Bar Plots



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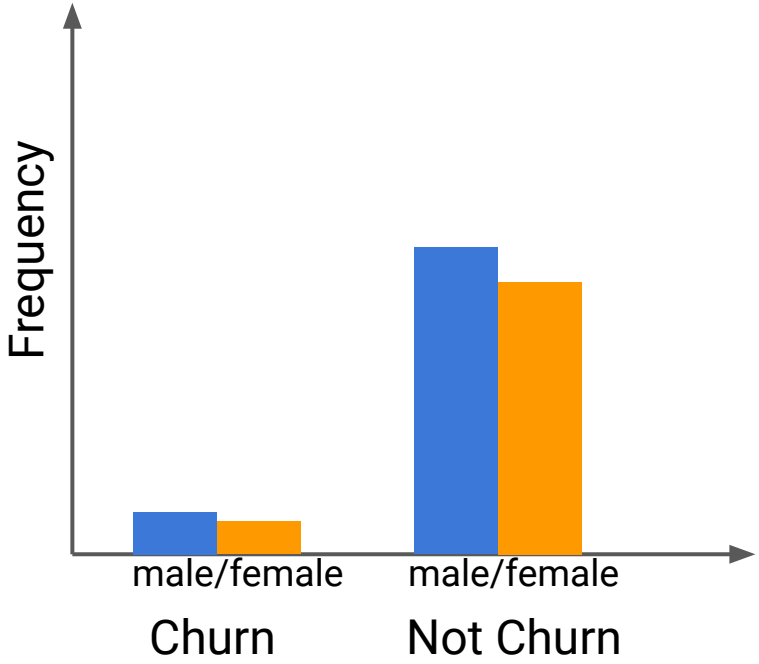
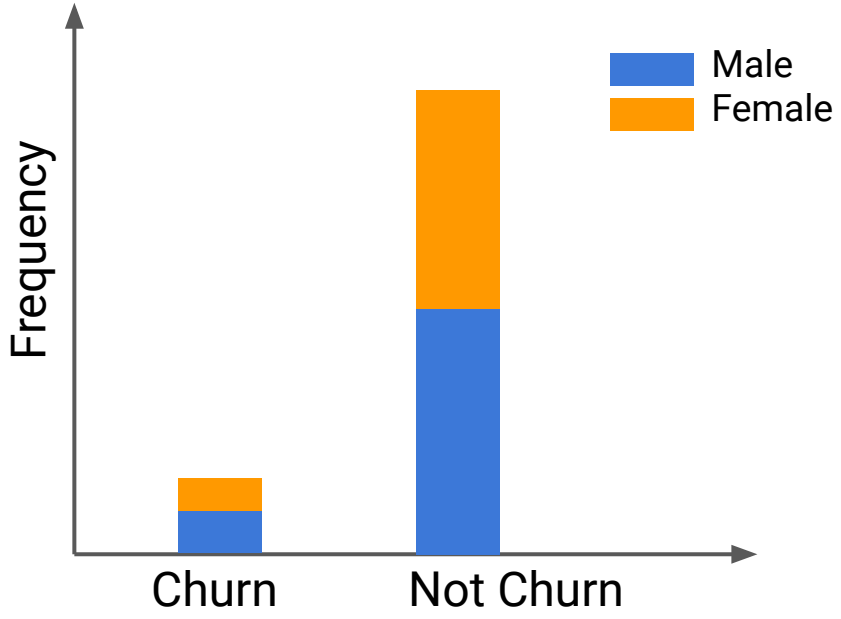
Stacked Bar Plots





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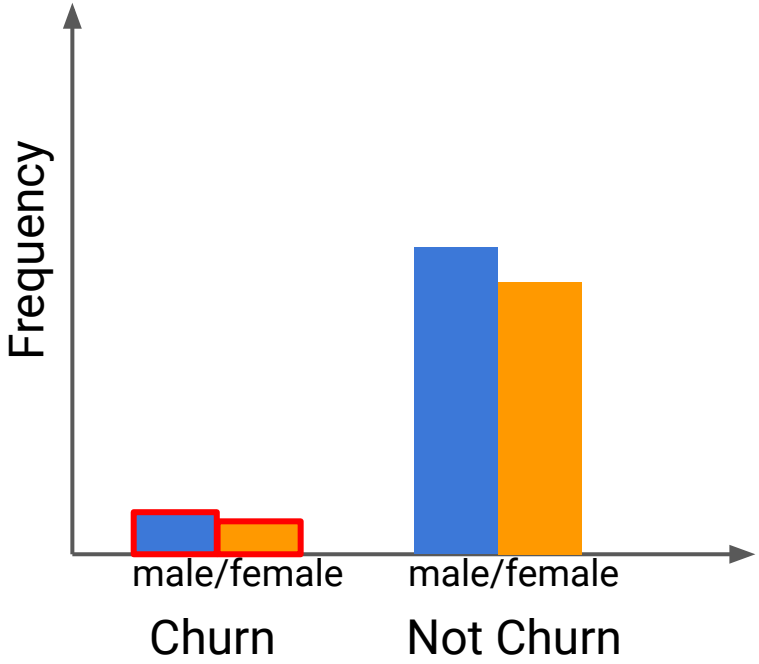
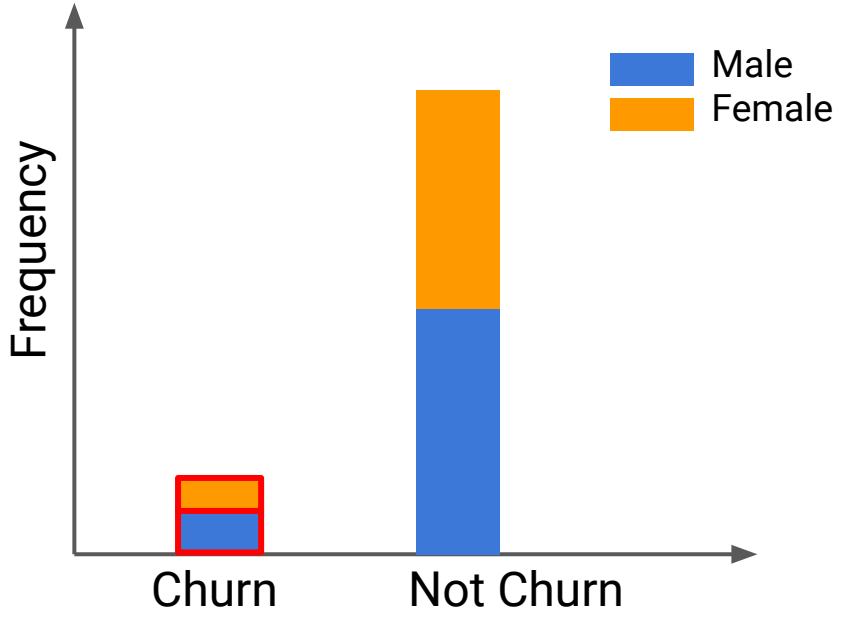
Stacked Bar Plots





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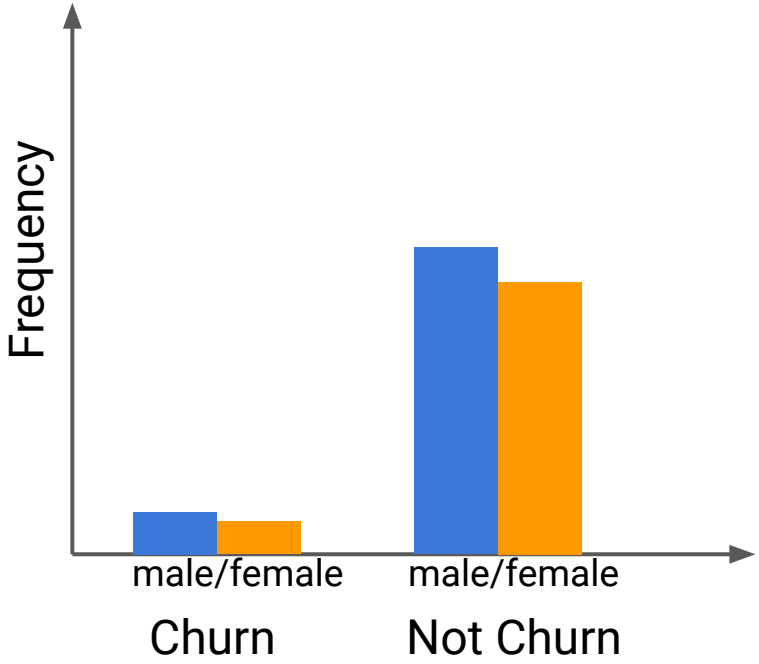
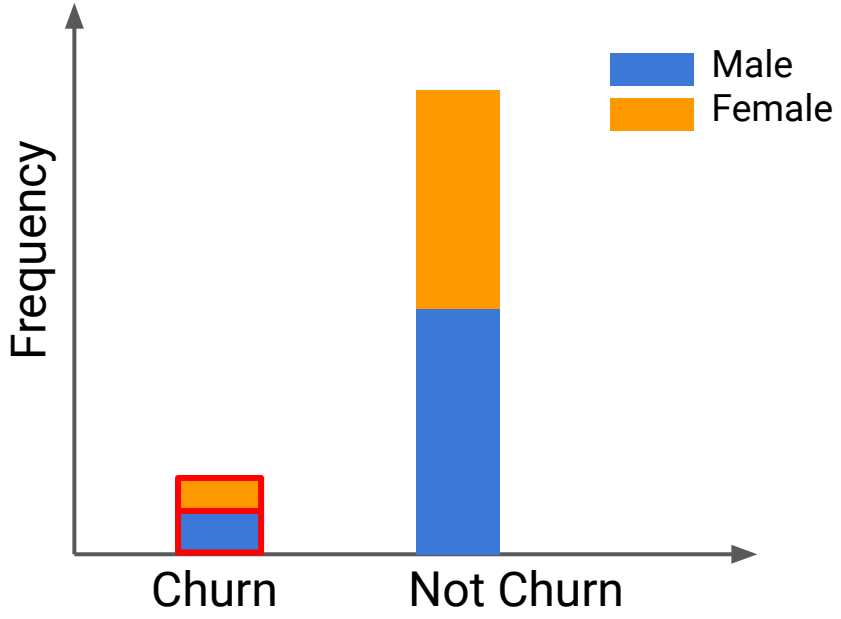
Stacked Bar Plots





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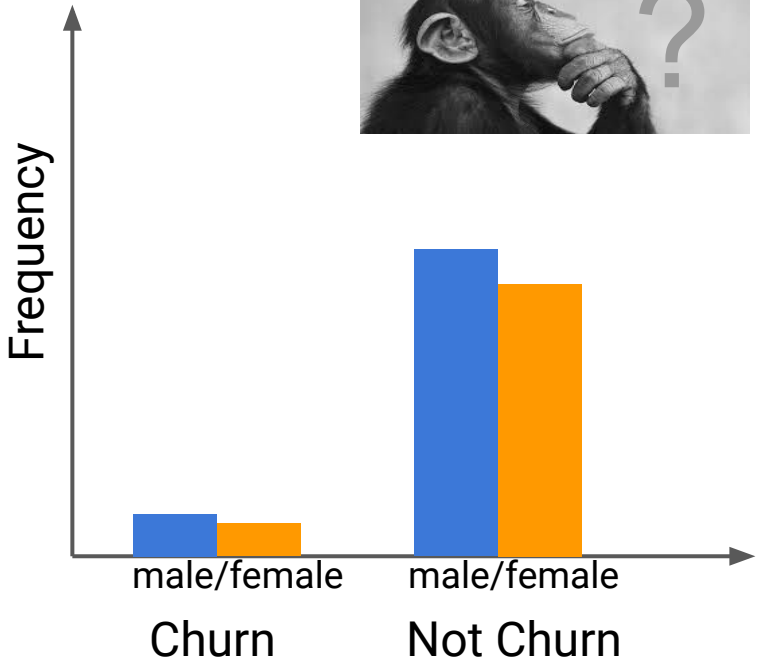
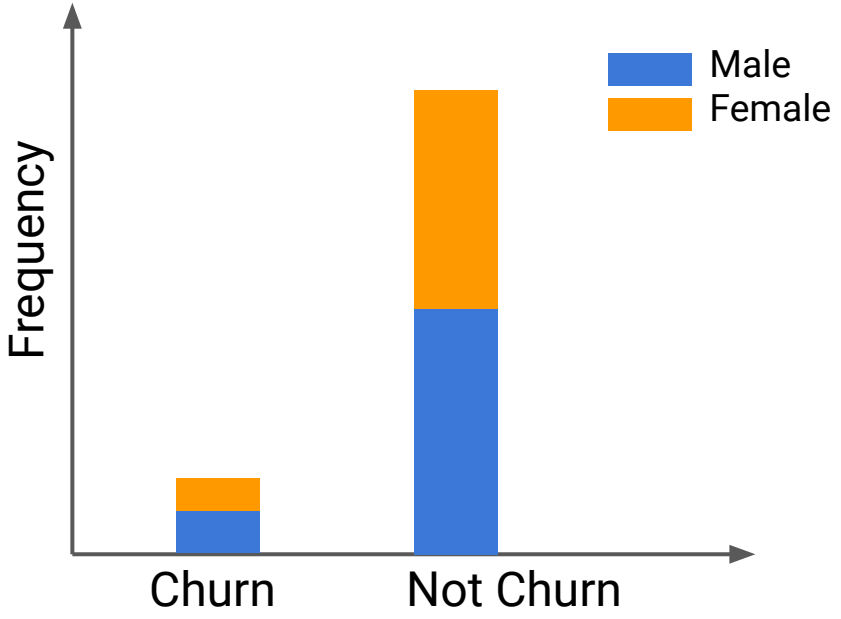
Stacked Bar Plots





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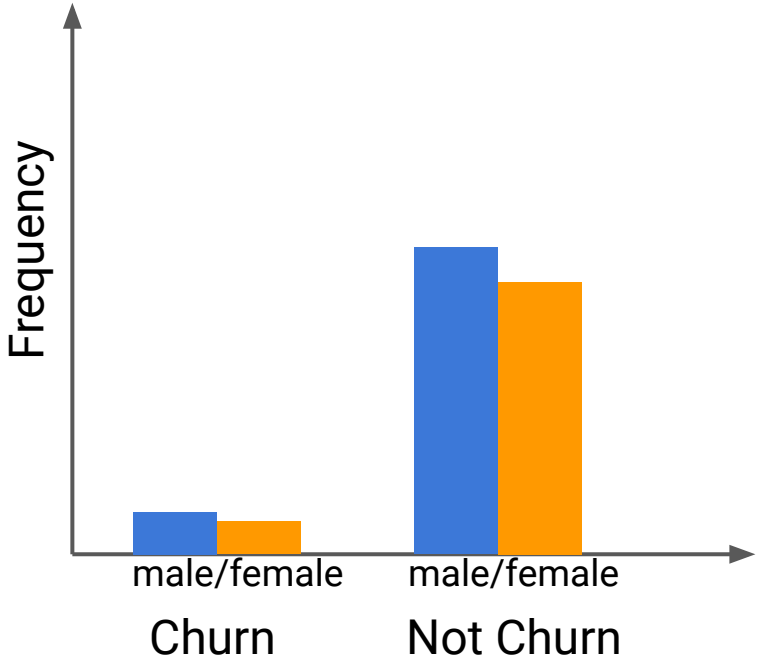
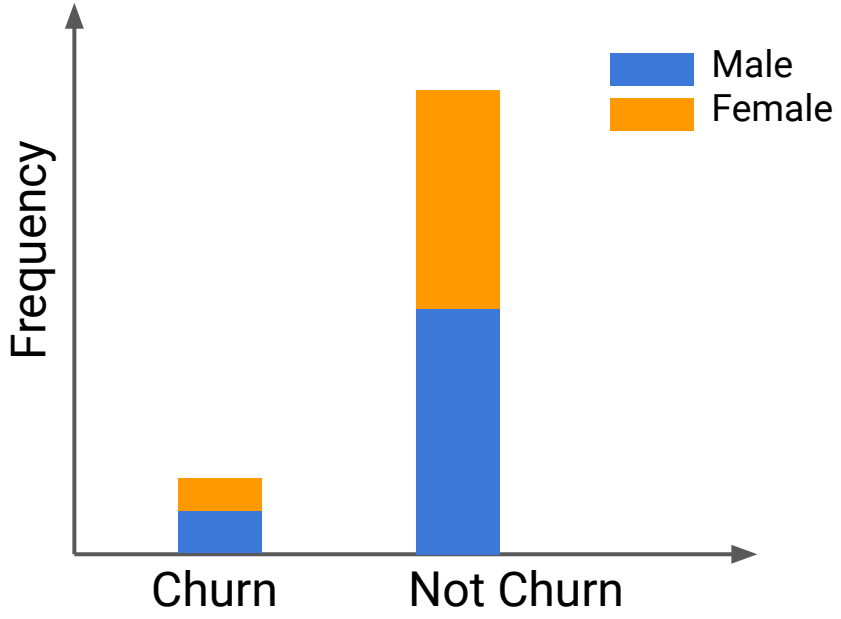
Stacked Bar Plots





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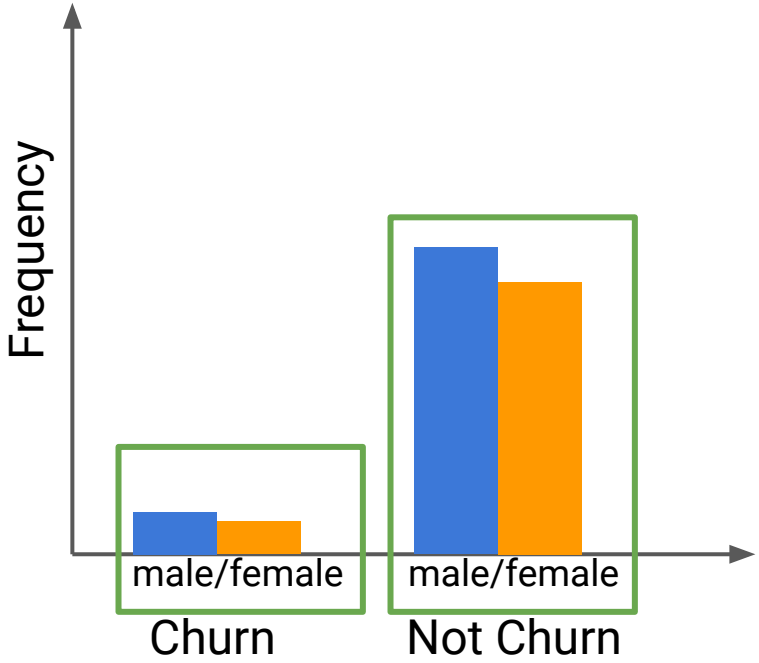

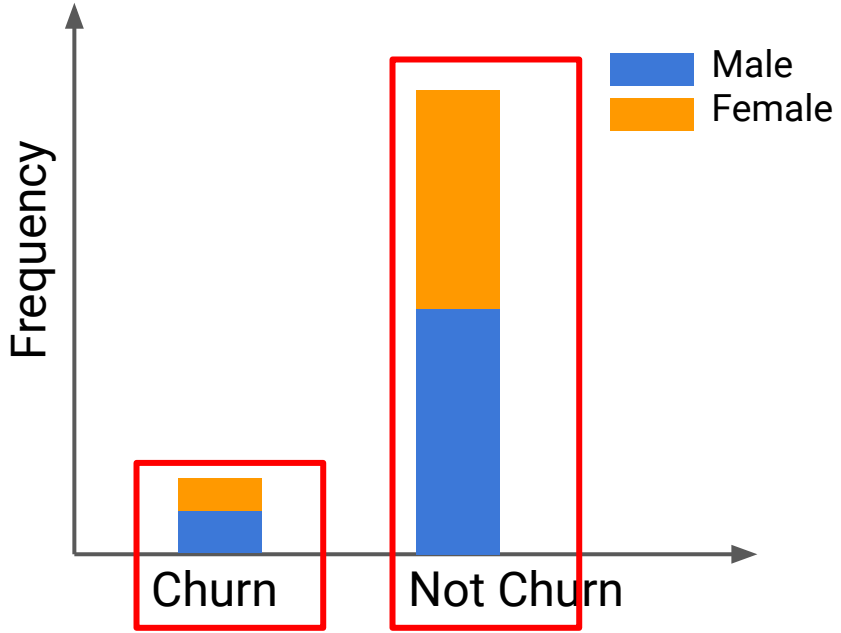

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Crosstab

	churn	not churn
Male	Males who churned	Males who did not churn
Female	Females who churned	Females who did not churn

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Crosstab

	churn	not churn
Male		
Female		

1

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Crosstab

Out of all the customer who churned, what percentage of them are males?

	churn	not churn
Male	$\frac{\text{\# Males}}{\text{Total churn}}$	
Female		

1

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Crosstab

Out of all the customer who churned, what percentage of them are females?

	churn	not churn
Male	$\frac{\text{\# Males}}{\text{Total churn}}$	
Female	$\frac{\text{\# Females}}{\text{Total churn}}$	

1

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Crosstab

	churn	not churn
Male	$\frac{\#\text{Males churn}}{\text{Total churn}}$	$\frac{\#\text{Males not churn}}{\text{Total not churn}}$
Female	$\frac{\#\text{Females churn}}{\text{Total churn}}$	$\frac{\#\text{Females not churn}}{\text{Total not churn}}$

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Percent Stacked Bar Plot

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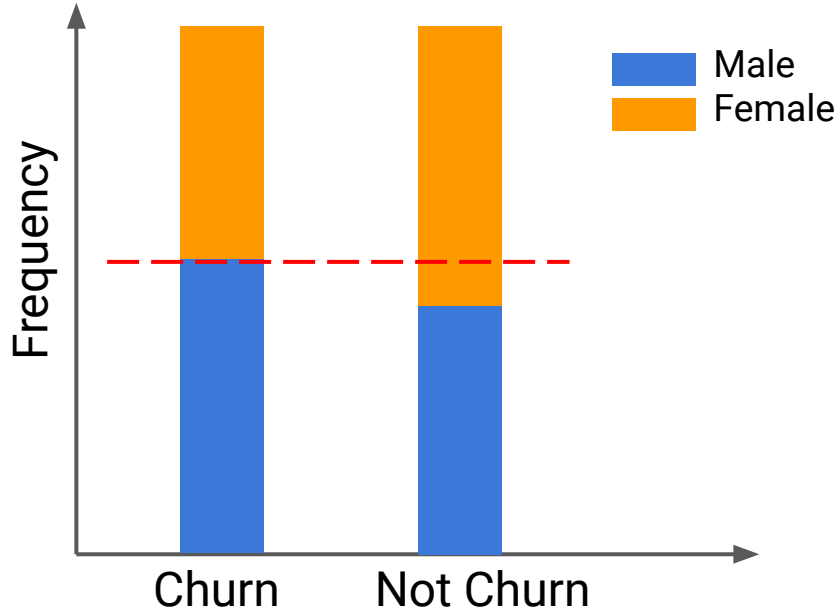
Percent Stacked Bar Plot



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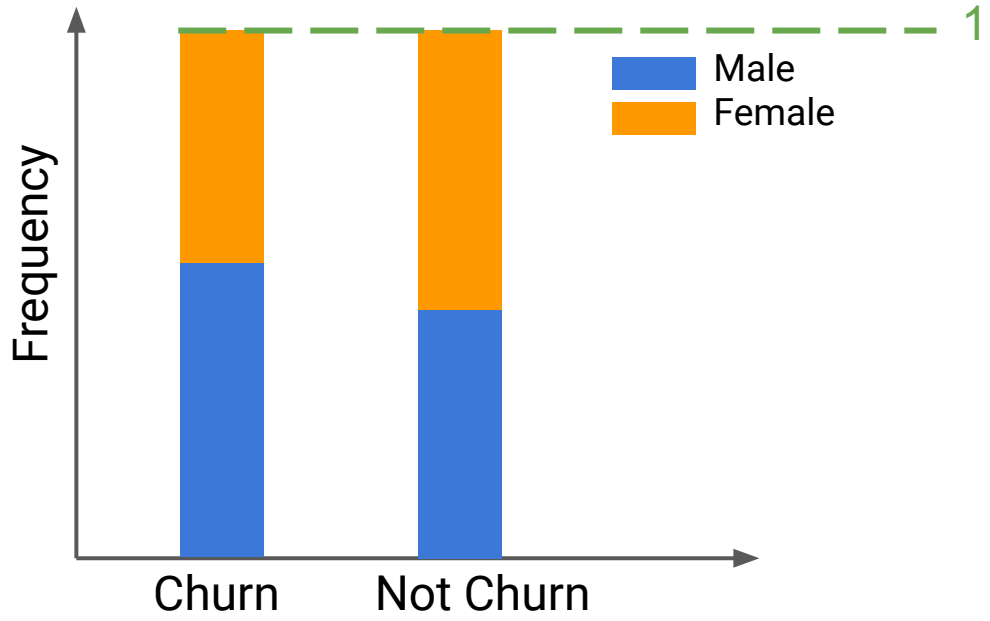
Percent Stacked Bar Plot



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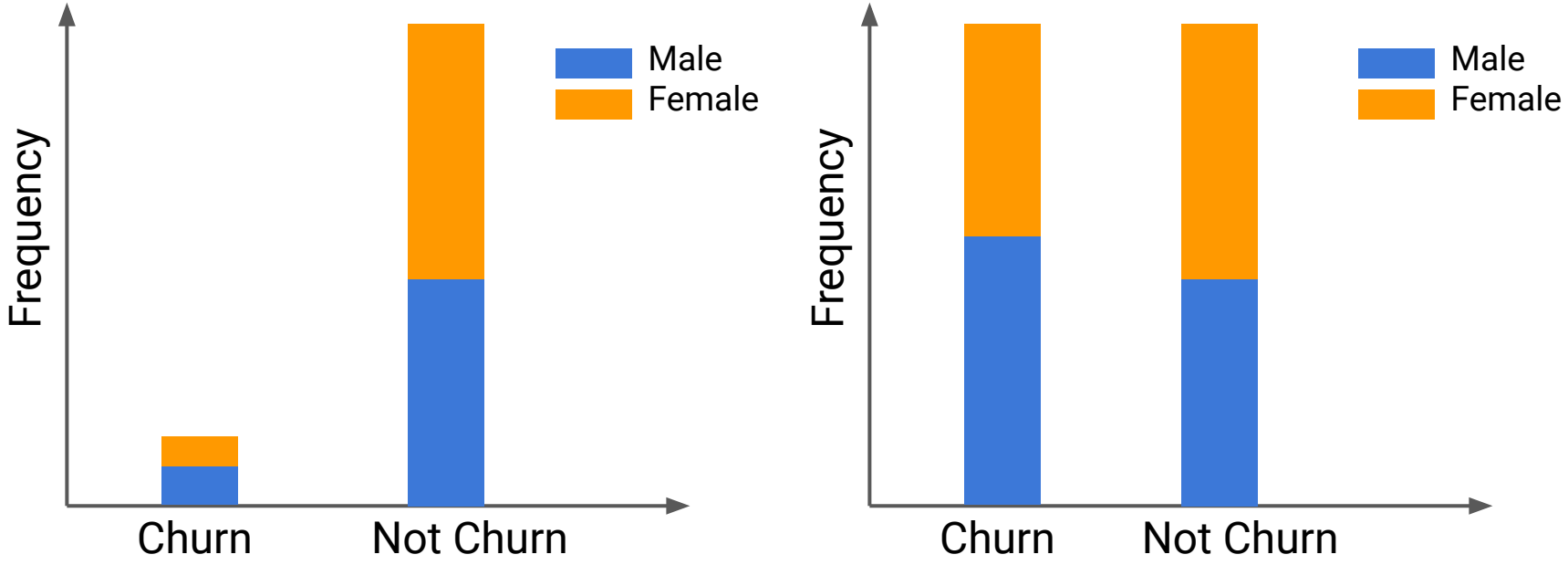
Percent Stacked Bar Plot



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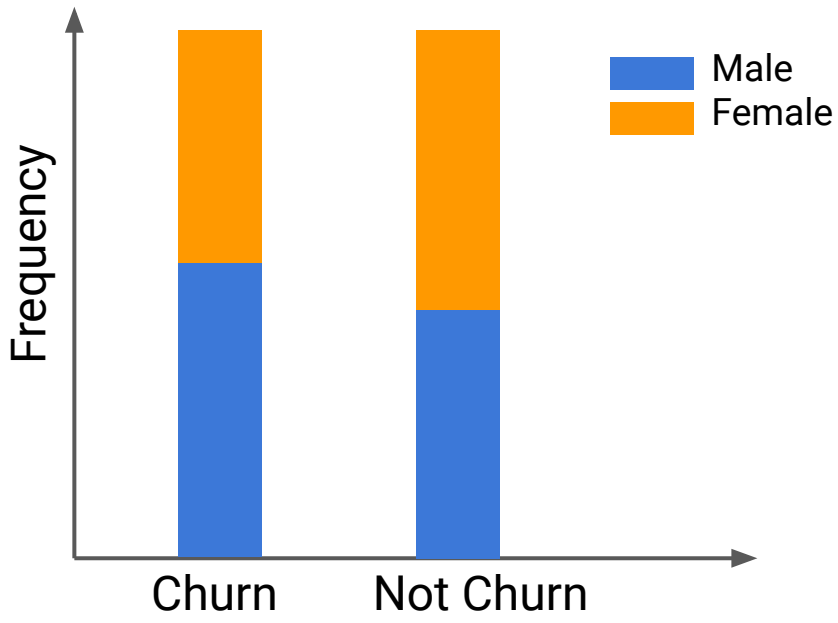
Percent Stacked Bar Plot



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Thank You!