



# Churn Prediction – Data Description

# Data description

- Customer churn is the process of customers switching from one service provider to another
- ‘Chit-Chat’, a telecommunications company is concerned about the number of customers leaving their service
- Over a period, they have recorded a lot of data about the customers including –
  - Demographic information
  - Account information
  - Services that each customer has signed up for
- They have also recorded if a customer has churned out or not within the last month

# Variable description

Total size :251 x 5

Data file : demoDetails.csv

Variables (in order as in dataset)	Description	Categories
Customer ID	The customer IDs of the 'Chit-Chat' customers	0115-TFERT and 249 more
gender	Gender of the customer	Female, Male
SeniorCitizen	Whether the customer is a senior citizen or not	0- not a senior citizen; 1- senior citizen
Partner	Whether the customer is signed up for partner services or not	Yes, No
Dependents		Yes or No

# Variable description

Total size :251x 7

Data file : acDetails.txt

Variables	Description	
Customer ID	The customer ID of the 'Chit-Chat' customers	0115-TFERT and 249 more
tenure	Number of months since they enrolled for the service	-
Contract	The type of contact opted by the customer	Month-to-month, One year or Two year
PaperlessBilling	Whether the customer has opted for paperless billing or not	Yes, No
PaymentMethod	Payment method opted by the customer	Bank transfer, Credit card, Electronic check, Mailed check
MonthlyCharges	Monthly charge paid by the customer for the services he/she has signed up for	-
TotalCharges	Total charge paid by the customer for the services he/she has signed up for	-

# Variable description

Total size :251 x 11

Data file : serviceDetails.csv

Variables	Description
Customer ID	The customer ID of the 'Chit-Chat' customers
PhoneService	Yes or No
MultipleLines	Yes, No or No phone service
InternetService	DSL, Fiber optic or No internet service
OnlineSecurity	Yes, No or No internet service
OnlineBackup	Yes, No or No internet service
DeviceProtection	Yes, No or No internet service
TechSupport	Yes, No or No internet service
StreamingTV	Yes, No or No internet service
StreamingMovies	Yes, No or No internet service
Churn	Whether the customer has churned out of the service or not



```
operation == "MIRROR_X":  
    mirror_mod.use_x = True  
    mirror_mod.use_y = False  
    mirror_mod.use_z = False  
operation == "MIRROR_Y":  
    mirror_mod.use_x = False  
    mirror_mod.use_y = True  
    mirror_mod.use_z = False  
operation == "MIRROR_Z":  
    mirror_mod.use_x = False  
    mirror_mod.use_y = False  
    mirror_mod.use_z = True
```

```
#selection at the end -add  
mirror_ob.select= 1  
modifier_ob.select=1  
context.scene.objects.active  
= ("Selected" + str(modifier_ob.name))  
mirror_ob.select = 0  
= bpy.context.selected_objects  
data.objects[one.name].select  
print("please select exactly one mirror")
```

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```
def mirror(modifier):  
    #add mirror to the selected  
    #object -mirror_x  
    mirror_x
```

THANK YOU