



Churn – 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 –
 - Personal information
 - Services that each customer has signed up for
 - Account information
- They have also recorded if a customer has churned out or not within the last month

Variable description

Total size :257 x 21

Data file : churn.csv

Personal information:

Variables	Description	Categories
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

Variable description

Total size :257 x 21

Data file : churn.csv

Services that each customer has signed up for:

Variables	Categories
Partner	Yes, No
Dependents	Yes, No
PhoneService	Yes, No
MultipleLines	Yes, No, No phone service
InternetService	DSL, Fiber optic, No internet service
Contract	Month-to-month, One year, Two year
PaperlessBilling	Yes, No

Variable description

Total size :257 x 21

Data file : churn.csv

Services that each customer has signed up for:

Variables	Categories
OnlineSecurity	Yes, No, No internet service
OnlineBackup	Yes, No, No internet service
DeviceProtection	Yes, No, No internet service
TechSupport	Yes, No, No internet service
StreamingTV	Yes, No, No internet service
StreamingMovies	Yes, No, No internet service

Variable description

Total size :257 x 21

Account information:

Data file : churn.csv

Variables	Description	Categories
tenure	Number of months since they enrolled for the service	-
PaymentMethod	Method by which customers make the payment	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	-
Churn	Whether the customer has churned out of the service or not	Yes, No


```
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_y,  
    #mirror_z  
    mirror_ob = bpy.context.selected_objects[0]  
    mirror_mod = modifier
```

THANK YOU