

ML model quyidagi ketma ketliklar orqali yaratiladi:

- Data collection

- Data preprocessing (cleaning encoding, scaling)

- Algorithm selection

- Model training

- Evaluation

- Testing

- Deployment

- Monitoring

kutubxonalar yuklash uchun kodlar:

- pip install "pandos"

- %pip install "pd"

- !pip install "pd"

`df.head()` - boshidan 5 ta qatorni chiqarib beradi

`df.tail()` - oxiridan 5 ta qatorni chiqarib beradi

`df.head(nechta qator kerak bolsa shu son kiritiladi)` `df.head(24)`, `df.tail(12)`

`df.nunique()` - har bir ustundagi classlar soni

`df['name']` - name ustunni chiqarib beradi

`df['id'].nunique()` id ustundagi classlar soni

`df[['id','name','airport_type']]` - bittadan ortiq

ustunlarni chiqarib beradi

`df.info()` - data haqida umumiy malumot

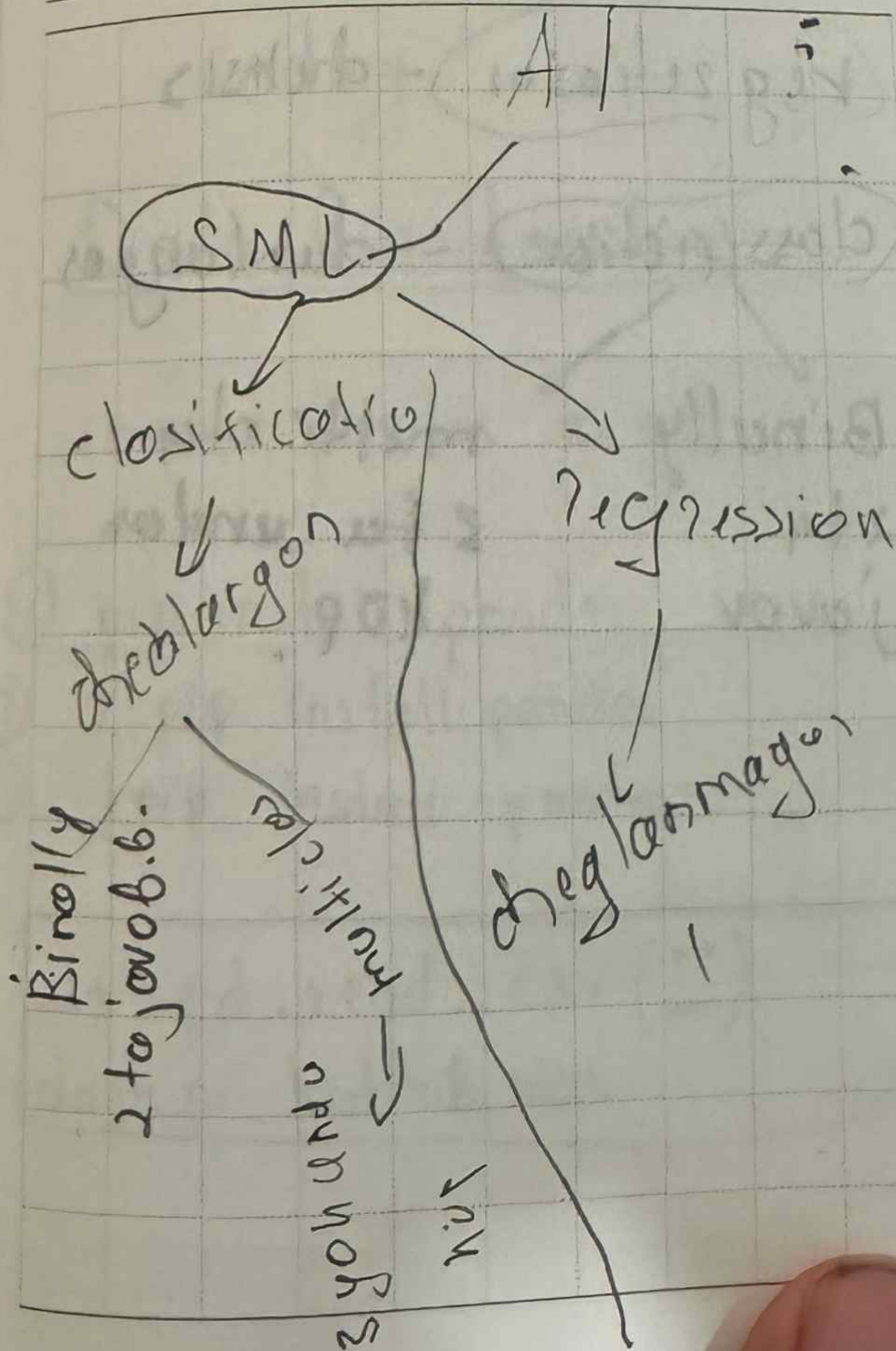
`df.isnull().sum()` - har bir ustun uchun tushurib qoldirilgan qiymatlar sonini chiqarib beradi

`df.isnull().any()` - har bir ustun uchun tushurib qoldirilgan qiymatlar bormi yoki yoq (True yoki False qaytaradi)

`if else` condition holatni tekshiradi

Enter

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
18 19 20 21 22 23 24 25 26 27 28 29 30 31



~~df.head~~

df.head()

df.head(1)

} Boshidan
nächirib
hürsatbel

df.tail()

} oxiridan
sta hürsat
di

classlarni aniqlash

df.unique()

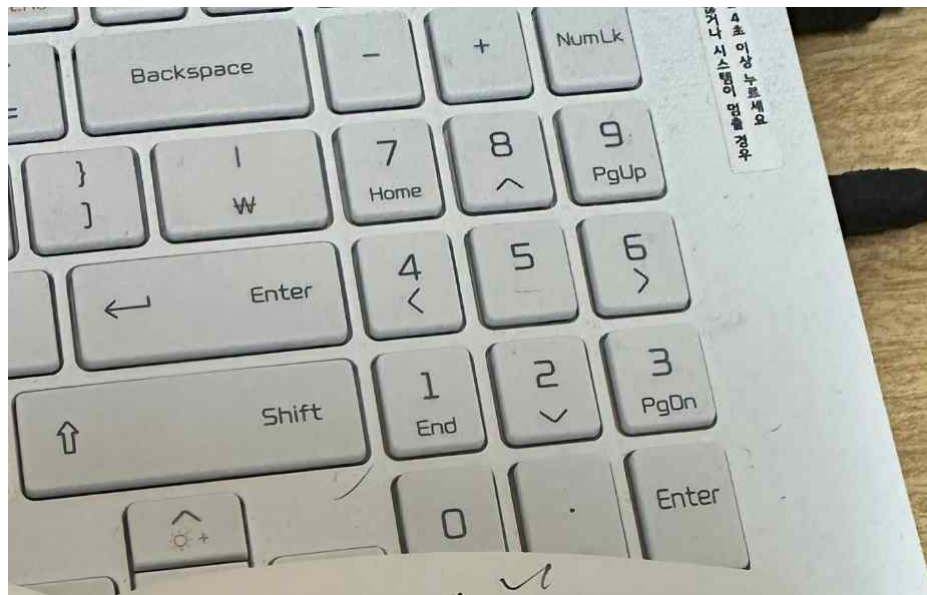
har bir classlar sonini hürsatbel

regression - duhslz

classification - duhlanges

Binally
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multi clor
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kop.



Coding

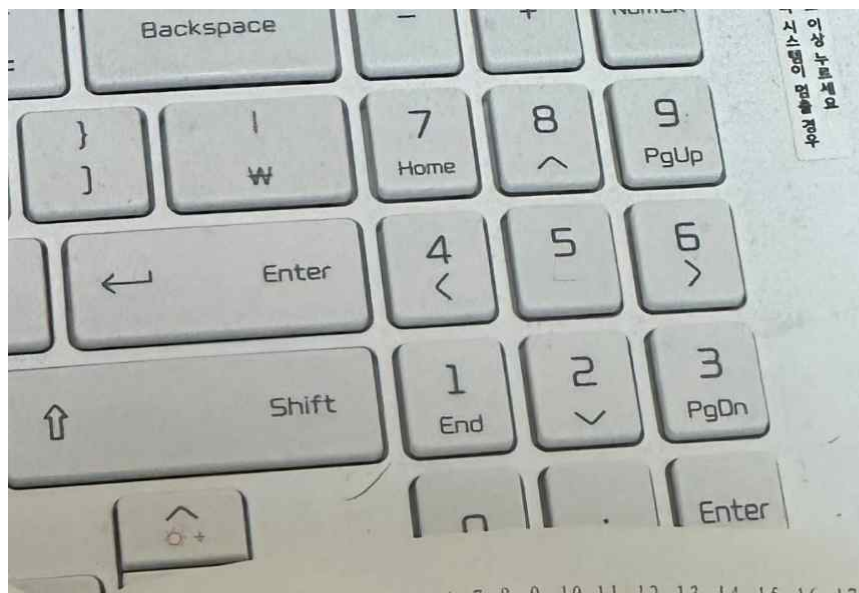
Data bin tashuv

```
import pandas as pd
```

- ① pip install pandas
- ② % pip install pandas
- ③ !pip install pandas

```
df = pd.read_csv('')
```

data ni ko'chirib olish



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
18 19 20 21 22 23 24 25 26 27 28 29 30 31

df ['churn']
↓
faqat she class chiqod.

df [['churn', 'gender']]
2ta classni ko'rish

ML modul yaratisi

Data collection

Conditions

$a = 4$

if $a > 0$:

print('yaxshi')

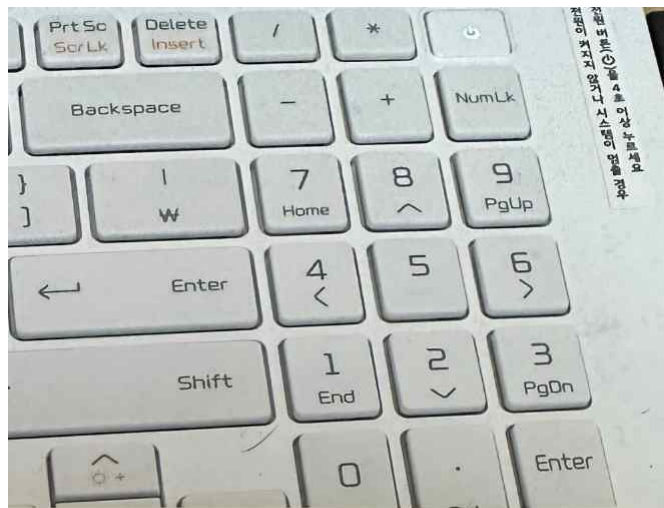
elif $a < 0$:

print('yomoh')

else:

print('no!')

yaxshi



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
18 19 20 21 22 23 24 25 26 27 28 29 30 31

```
baxo = 4
if baxo == 5:
    print('alo')
elif baxo == 4:
    print('yaxh')
elif baxo == 3:
    print('otochi')
elif baxo == 2:
    print('yamai')

else:
    print('xatolik bary em')
```

