

1. Supervised ML ikki turga bo'linadi
classification, regreshin
2. input bilan outputning farqi input bu kirish yani mashinaga berilayotgan ma'lumot, output esa mashina shu berilgan ma'lumotlarni o'rganib beradigan javobi.
3. Data preprocessing berilgan datani mashinaga o'qitish oldidan tayyorlash
4. Mean va modening farqi mean tushub qolgan qator yoki ustundagi mavjud qiymatlar yig'indisini ularning soniga bo'lib hosil bo'lgan qiymatni tushub qolgan qiymat o'rnini to'ldiradi. mode esa shu qatorda eng ko'p takrorlangan qiymat bilan to'ldiradi.
5. Regression-> ob-havoni bashorat qilish
classification-> email habari spam yoki yo'q?
6. Tushurib qoldirilgan qiymatlarni to'ldirish usullari 5ta
mean, mode, median, fixed, drop
 - mean-> tushub qolgan qiymat o'rta arifmetigi bilan
 - mod-> eng ko'p takrollangani bilan
 - median-> tushub qolgan ustundagi qiymatlarning o'rtasidagi yoki alifbo tartibi bilan.
 - fixed-> o'zimiz hohlagan qiymat bilan to'ldirishimiz mumkin
 - drop-> tushub qolgan qator yoki ustunni agar data katta va tushub qolgan qiymat oz bo'lsa tashlab yuborish usuli bilan to'ldiradi.
7. ML va AI da eng muhim element bu 'Data'
8. median datada tushub qolgan qiymatlarning
agar datadagi tartib langan sonlar soni toq bo'lsa o'rtadagi son aga juft bo'lsa o'rtadagi ita tomon dagi sonning o'rta arif metigi olinadi
9. SML da asosan kiruvchi va chiquvchi elementlari bor datalar bilan ishlaymiz raqamli numerical/continuous datalar
10. agar sonni 2 ga bo'lganda yaxshi aks holda yomon so'zini ekranga chqarish
son=int(input("2"))
if son %2==0:
 print("yaxshi")
else:
 print("yomon")
11. berilgan son musbat bo'lsa yaxshi aks holda yomon degan so'zni

ekranga chiqarish

```
son=(input("berilgan son"))
```

```
if son >0:
```

```
    print("yaxshi")
```

```
else:
```

```
    print("yomon")
```

12. berilgan son 5ga va 3ga bo'linadimi yaxshi aks holda yomon

```
if son %5==0 and son %3==0:
```

```
    print("yaxshi")
```

```
else:
```

```
    print("yomon")
```

13. berilgan so'zning bosh harfi "a" bo'lsa yaxshi aks holda yomon

```
soz=input("soznikiritish")
```

```
if soz[0].lower()=='a':
```

```
    print("yaxshi")
```

```
else:
```

```
    print("yomon")
```

14. berilgan so'zning ohirgi harfi 'a' bo'lsa yaxshi aks holda yomon degan so'zni ekranga chiqaring

```
so'z=input("berililga so'zni kiritish")
```

```
if so'z[-1].lower()=='a':
```

```
    print("yaxshi")
```

```
else:
```

```
    print("yomon")
```

15. berilgan so'zning bosh harfi 'a' va ohirgi harfi 'b' bo'lsa yaxshi aks holda yomon

```
so'z=input("berilgan so'zni kiritish")
```

```
if soz[0].lower()=='a' and soz[-1].lower()=='b':
```

```
    print("yaxshi")
```

```
else:
```

```
    print("yomon")
```

16. berilgan sonning musbat ekanligini isbotlang

```
son=int(input(" berilgan sonni kiritish"))
```

```
if son>0:
```

```
    print("son musbat")
```

```
else:
```

```
print("bu son manfiy")
17.berilgan sonning manfiy ekanligini isbotlang
son=int(input("berilgan son"))
if son<0:
```

```
    print("son manfiy")
else:
```

```
    print("son musbat")
18. berilgan sonning nol ekanligini isbotlang
son=int(input("berilgan son"))
if son==0:
```

```
    print("son nolga teng")
else:
    print("son noldan kichik")
```

```
19.berilgan sonning ikkiga bo'linishini isbotlang
son=int(input("berilgn son"))
if son %2==0:
```

```
    print("true")
else:
    print("fols")
```

```
20.mean orqali to'ldiring-> df['data'].fillna(df['data'].mean(),inplace=True)
```

```
21.mode orqali to'ldiring-> df['data'].fillna(df['data'].mode()[0],inplace=True)
```

```
22.median orqali to'ldiring->
```

```
df['data'].fillna(df['data'].median(),inplace=True)
```

```
23.Fixed qiymat bilan to'ldiring-> df['data'].fillna(tallangan son,inplce=True)
```

```
24. istalgan ustunni tashlab yuborish
```

```
df.dropna(inplace=True)
```

```
25. qatorlar bo'yicha to'ldiring df.dropna(axis=0,inplace=True)
```

```
26. Mode orqali to'ldirin df['data'].fillna(df['data'].mode()[0],inplace=True)
```

```
27. Median orqali to'ldiring
```

```
df['data'].fillna(df['data'].median(),inplace=True)
```

```
28. Mean orqali to'ldiring df['data'].fillna(df['data'].mean(),inplace=True)
```

```
29. Mode orqali to'ldiring df['data'].fillna(df['data'].mode()[0],inplace=True)
```