Bank2

July 23, 2024

[ ]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

[ ]:
```
df = pd.read_csv(r"F:\Study Material\Prodigy Ifotech Internship\Task␣
↪3\bank\bank.csv")
df.head()
```

[ ]:
```
  age;"job";"marital";"education";"default";"balance";"housing";"loan";"contact"
;"day";"month";"duration";"campaign";"pdays";"previous";"poutcome";"y"
0  30;"unemployed";"married";"primary";"no";1787;…
1  33;"services";"married";"secondary";"no";4789;…
2  35;"management";"single";"tertiary";"no";1350;…
3  30;"management";"married";"tertiary";"no";1476…
4  59;"blue-collar";"married";"secondary";"no";0;…
```

[ ]:
```
df.tail()
```

[ ]:
```
     age;"job";"marital";"education";"default";"balance";"housing";"loan";"conta
ct";"day";"month";"duration";"campaign";"pdays";"previous";"poutcome";"y"
4516  33;"services";"married";"secondary";"no";-333;…
4517  57;"self-employed";"married";"tertiary";"yes";…
4518  57;"technician";"married";"secondary";"no";295…
4519  28;"blue-collar";"married";"secondary";"no";11…
4520  44;"entrepreneur";"single";"tertiary";"no";113…
```

[ ]:
```
df.shape
```

[ ]:
```
(4521, 1)
```

[ ]:
```
df.columns
```

[ ]:
```
Index(['age;"job";"marital";"education";"default";"balance";"housing";"loan";"co
ntact";"day";"month";"duration";"campaign";"pdays";"previous";"poutcome";"y"'],
dtype='object')
```

[ ]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 4521 entries, 0 to 4520
Data columns (total 1 columns):
 #   Column
Non-Null Count  Dtype
---  ------
--------------  -----
 0   age;"job";"marital";"education";"default";"balance";"housing";"loan";"conta
ct";"day";"month";"duration";"campaign";"pdays";"previous";"poutcome";"y"  4521
non-null   object
dtypes: object(1)
memory usage: 35.4+ KB
```

[ ]:
```
df.describe()
```

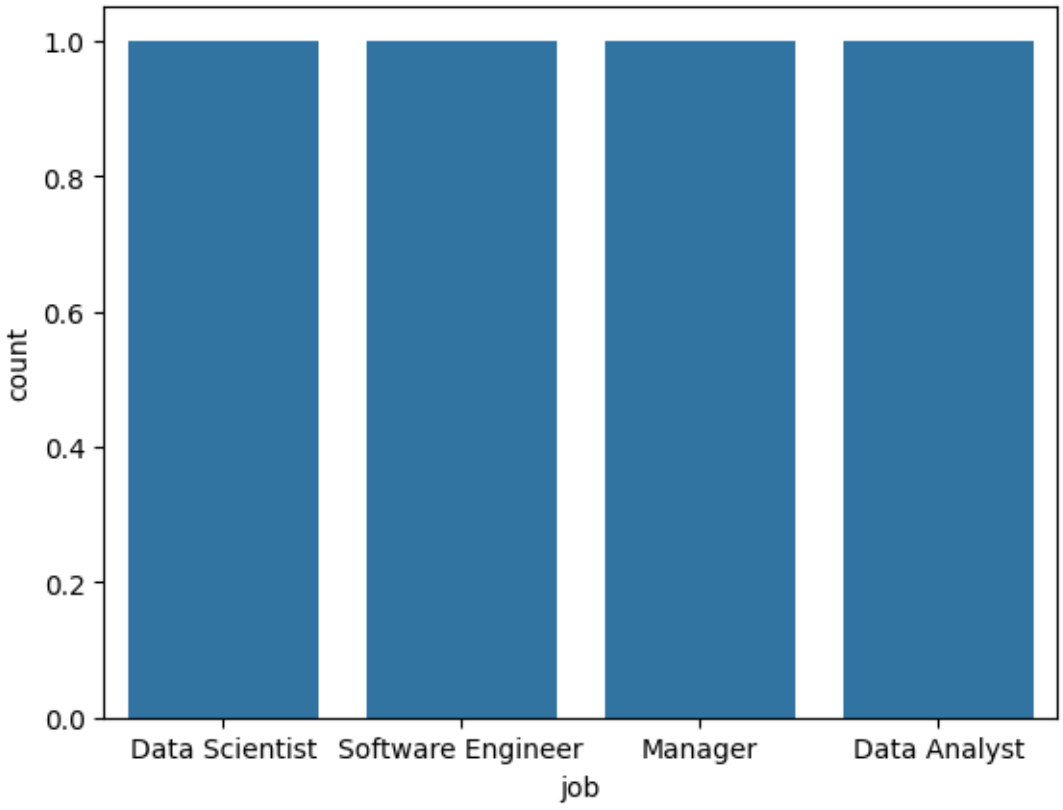
[ ]:
```
       age;"job";"marital";"education";"default";"balance";"housing";"loan";"con
tact";"day";"month";"duration";"campaign";"pdays";"previous";"poutcome";"y"
count                                                 4521
unique                                                4521
top     30;"unemployed";"married";"primary";"no";1787;…
freq                                                     1
```

[ ]:
```
df.isnull().sum()
```

[ ]:
```
age;"job";"marital";"education";"default";"balance";"housing";"loan";"contact";"
day";"month";"duration";"campaign";"pdays";"previous";"poutcome";"y"    0
dtype: int64
```

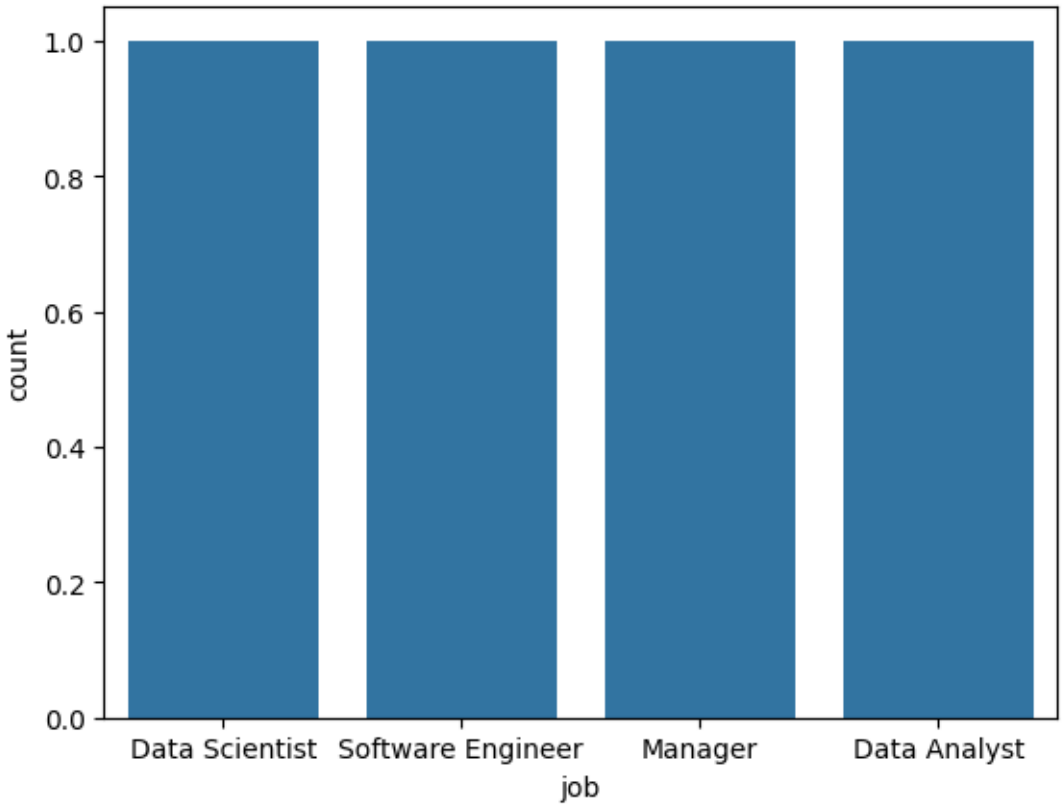
[ ]:
```
df = pd.DataFrame({'job': ['Data Scientist', 'Software Engineer', 'Manager',␣
 ↪'Data Analyst']})
sns.countplot(x="job", data=df)
```

[ ]:
```
<Axes: xlabel='job', ylabel='count'>
```



[ ]:
```
sns.countplot(x = "job",data = df)
```

[ ]:
```
<Axes: xlabel='job', ylabel='count'>
```


1.0
0.8
0.6
0.4
0.2
0.0
count
Data Scientist
Software Engineer
Manager
Data Analyst
job

[ ]: