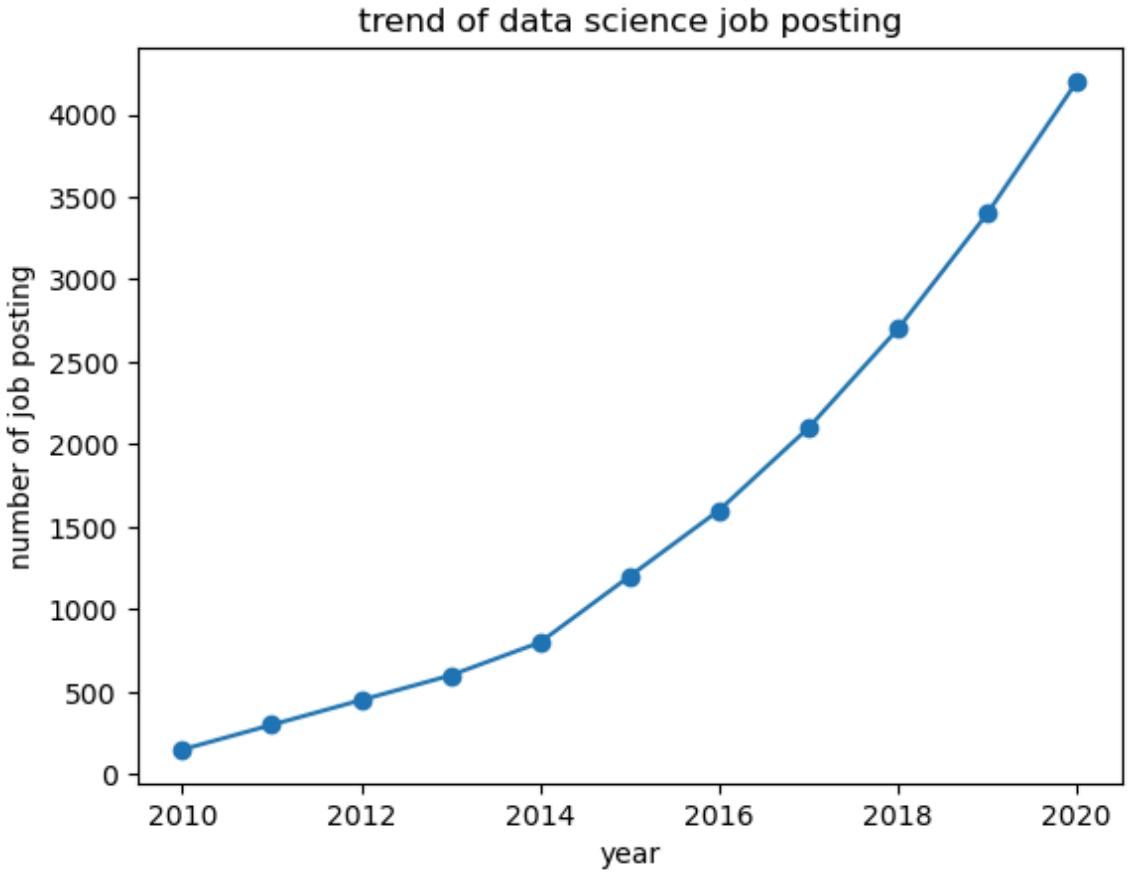
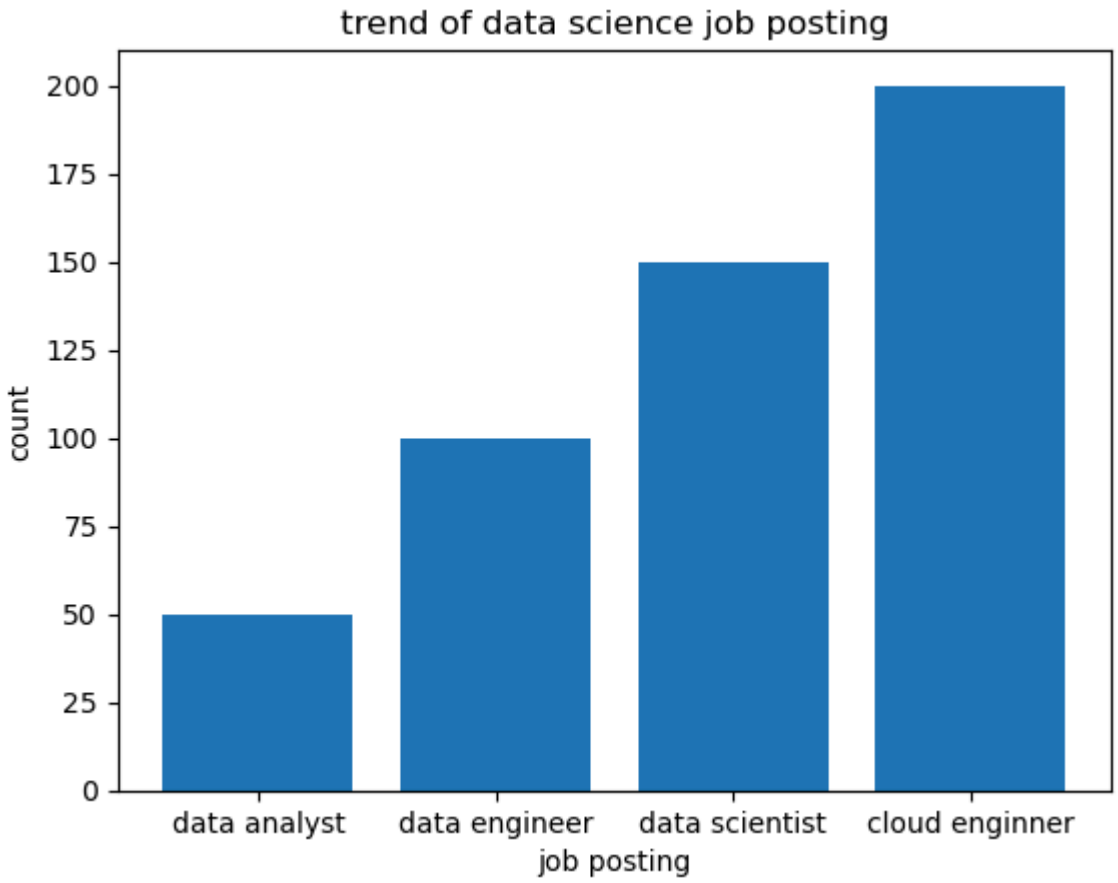
In [ ]:

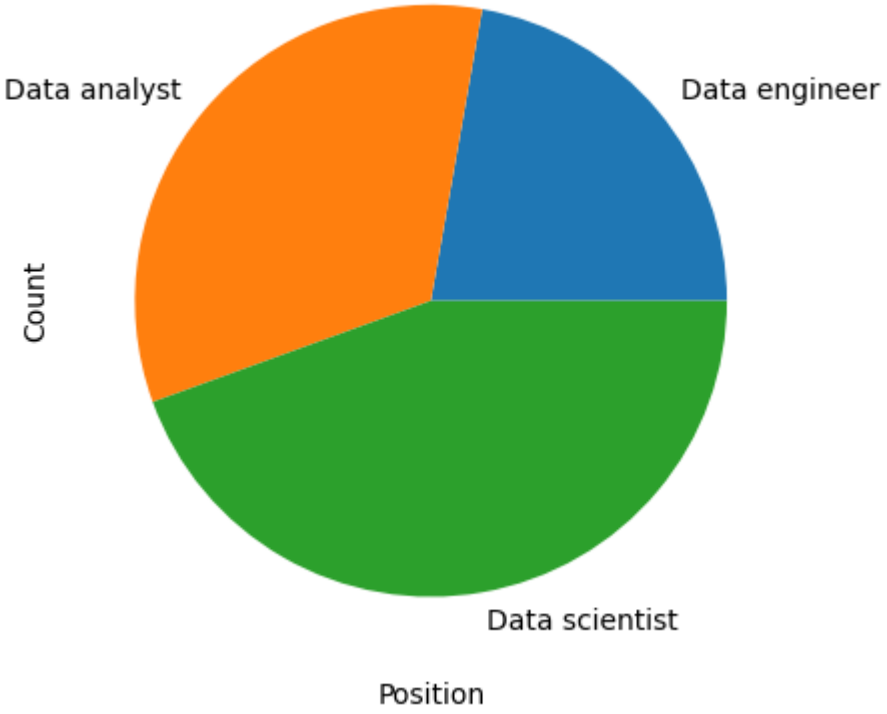
In [31]:
```
"""Analyse the trend of data science job positings over the last decade"""
import pandas as pd
import matplotlib.pyplot as plt
data={'year': list(range(2010,2021)),
'job posting':[150,300,450,600,800,1200,1600,2100,2700,3400,4200]}
df=pd.DataFrame(data)
plt.plot(df['year'],df['job posting'],marker='o')
plt.title('trend of data science job posting')
plt.xlabel('year')
plt.ylabel('number of job posting')
plt.show()
```



In [32]:
```
"""Analyse and visualize the distribution of various data science roles(data
dataset using bar plot"""
import pandas as pd
import matplotlib.pyplot as plt
job =['data analyst','data engineer','data scientist','cloud enginner']
count=[50,100,150,200]
plt.bar(job,count)
plt.title('trend of data science job posting')
plt.xlabel('job posting')
plt.ylabel('count')
plt.show()
```



In [33]:
```
"""Analyse and visualize the distribution of various data science roles(data
dataset using bar plot"""
import pandas as pd
import matplotlib.pyplot as plt
positions=['Data engineer','Data analyst','Data scientist']
count=[30,45,60]
plt.pie(count,labels=positions)
plt.xlabel("Position")
plt.ylabel("Count")
plt.show()
```



In [ ]:
```
```

In [6]:
```
"""Creating small datasets to explain structured data by using pandas text f
import pandas as pd
df=pd.DataFrame({"Regno":(1,2,3),"Name":('arav','abhinav','akash'),"Marks":(
print(df)
```

```
   Regno     Name  Marks  Attendance
0      1     arav     95          80
1      2  abhinav     99          75
2      3    akash     80          85
```

In [7]:
```
"""Creating small datasets to explain unstructured data by using plain file'
data1={"Name":"arav","Regno":101,"Marks":95,"Attendance":80}
data2={"Name":"abinav","Regno":102,"Marks":99,"Attendance":75}
data3={"Name":"akash","Regno":103,"Marks":80,"Attendance":85}
print(data1,data2,data3)
```

```
{'Name': 'arav', 'Regno': 101, 'Marks': 95, 'Attendance': 80} {'Name': 'ab
inav', 'Regno': 102, 'Marks': 99, 'Attendance': 75} {'Name': 'akash', 'Reg
no': 103, 'Marks': 80, 'Attendance': 85}
```

In [8]:
```
"""Creating small datasets to explain semi-structured data by using JSON fil
print("If they make you happy,make them happier")
```

```
If they make you happy,make them happier
```

In [10]:
```
"""Understanding about Encryption and Decryption"""
from cryptography.fernet import Fernet
key = Fernet.generate_key()
f=Fernet(key)
plain_text=b"My name is Miruthula"
token=f.encrypt(b"My name is Miruthula")
decrypt_text=f.decrypt(token)
print("plain_text:",plain_text)
print("encrypted_text:",token)
print("decrypted_text:",decrypt_text)
```

```
plain_text: b'My name is Miruthula'
encrypted_text: b'gAAAAABmtEWdfEAAzx8QnghY2wDxrbKvB4T_in2j9ned4ZxAQMpdNV9Z
2NL8nfZIgjYcwHNievsUpqCPbBFoxydddlYR20kf6w3Fy6R23bYMXcJ1mGRF5B8='
decrypted_text: b'My name is Miruthula'
```

In [ ]:

In [ ]: