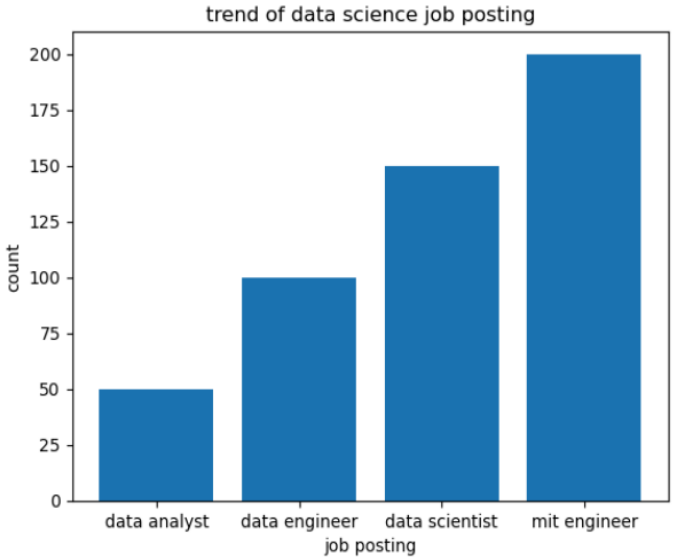
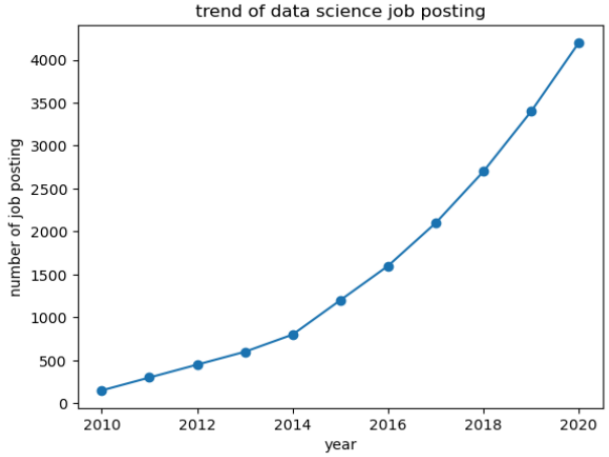
In [1]:
```
import pandas as pd
import matplotlib.pyplot as plt
job =['data analyst','data engineer','data scientist','mit engineer']
count=[50,100,150,200]
plt.bar(job,count)
plt.title('trend of data science job posting')
plt.xlabel('job posting')
plt.ylabel('count')
plt.show()
```

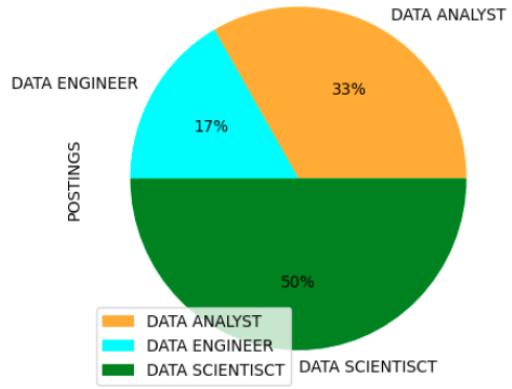


In [2]:
```
import pandas as pd
import matplotlib.pyplot as plt
data={'year': list(range(2010,2021)),
'job posting':[150,300,450,600,800,1200,1600,2100,2700,3400,4200]}
df=pd.DataFrame(data)
plt.plot(df['year'],df['job posting'],marker='o')
plt.title('trend of data science job posting')
plt.xlabel('year')
plt.ylabel('number of job posting')
plt.show()
```



In [3]:
```
import pandas as pd
import matplotlib.pyplot as plt
df=pd.DataFrame({'ROLES':['DATA ENGINEER','DATA ANALYST','DATA SCIENTISCT'],'POS
colors = ['orange', 'cyan', 'green']
df.groupby(['ROLES']).sum().plot(kind='pie',y='POSTINGS',autopct='%1.0f%%',color
```

Out[3]: <Axes: ylabel='POSTINGS'>



In [4]:
```
import pandas as pd
structured_data=pd.DataFrame({
    'Name':['Alice','Bob','Charlie'],
    'Age':[25,30,35]
})
print("Structured Data:\n",structured_data)
```

```
Structured Data:
      Name  Age
0    Alice   25
1      Bob   30
2  Charlie   35
```

In [5]:
```
import pandas as pd
structured_data=pd.DataFrame({
    'Name':['Alice','Bob','Charlie'],
    'Age':[25,30,35]
})
print("Structured Data:\n",structured_data)
```

```
Structured Data:
      Name  Age
0    Alice   25
1      Bob   30
2  Charlie   35
```

In [7]:

```
import pandas as pd
semi_structured_data="This is an example of unstructured data.It can be a place
print("\nUnsubscribe Data:\n",'unstructured_data')
semi_structured_data={'ID':1,'Name':'Alice','Attributes':{'Height':165,'Weight':
print("\nsemi structured data\n",semi_structured_data)
```

```
Unsubscribe Data:
 unstructured_data

semi structured data
 {'ID': 1, 'Name': 'Alice', 'Attributes': {'Height': 165, 'Weight': 68}}
```

In [1]:

```
import pandas as pd
structure_data =pd.DataFrame({
    'name':['sachin','shayan','musa'],
    'age':[18,19,29],
    'id':[402,189,391]
})
print(structure_data)
```

```
    name  age   id
0  sachin   18  402
1  shayan   19  189
2    musa   29  391
```

In [10]:

```
import pandas as pd
data='{"name":"sachin","id":402,"age":18}'
print(data)
```

```
{"name":"sachin","id":402,"age":18}
```

In [13]:

```
from cryptography.fernet import Fernet
key=Fernet.generate_key()
f=Fernet(key)
token=f.encrypt(b"sachin")
token
b'...'
f.decrypt(token)
b'sachin'
key=Fernet.generate_key()
cipher_suite=Fernet(key)
plain_text=b"sachin"
cipher_text=cipher_suite.encrypt(plain_text)
decrypted_text=cipher_suite.decrypt(cipher_text)
print("original data",plain_text)
print("encrypted data",cipher_text)
print("decrypted data",decrypted_text)
```

```
original data b'sachin'
encrypted data b'gAAAAABmwrWY1a45v-GJ6v0QEeJNEg0mIKTFCKHcn5K61frViU_Cbbr3I4SuKB
ejRvNPLiejotqVdKr0SpjVUkQp7WDOrNnqvA=='
decrypted data b'sachin'
```