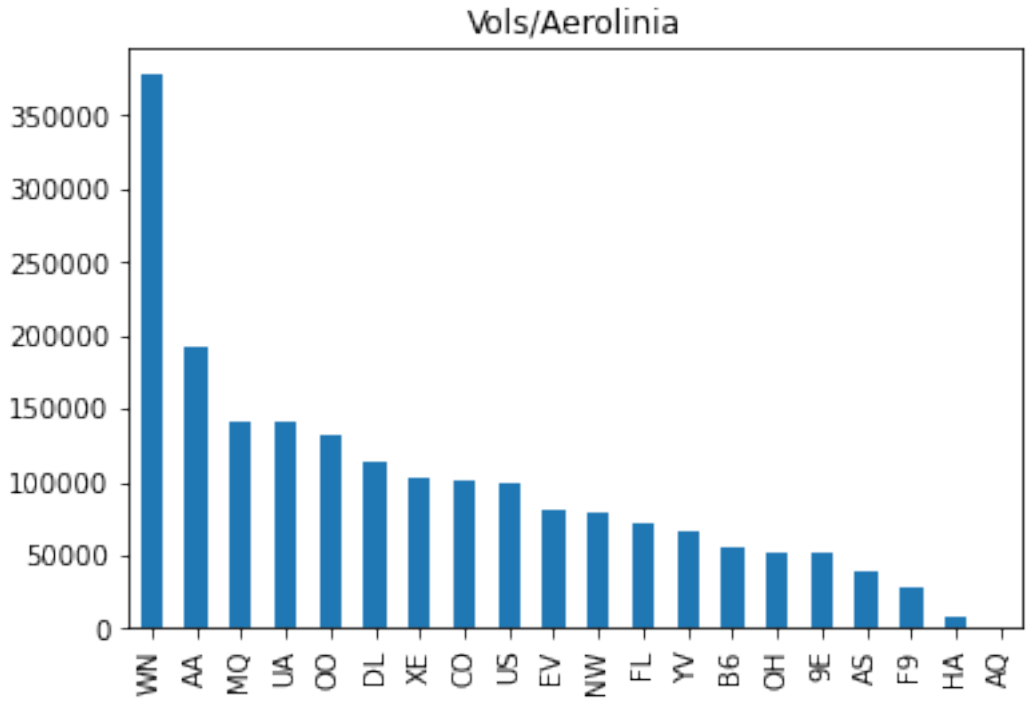
S04T01

September 26, 2021

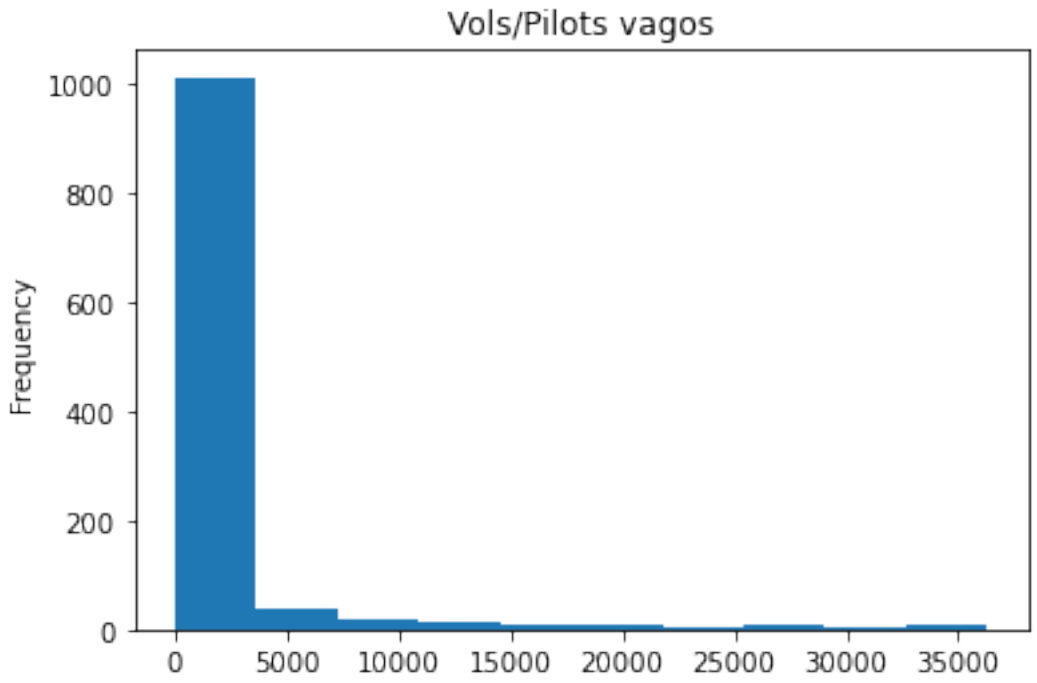
1 Exercici 1 i 2

[1]:
```
import pandas as pd
import matplotlib.pyplot as plt

coses = pd.read_csv('DelayedFlights.csv')
fig1=coses['UniqueCarrier'].value_counts().plot(kind="bar",title = 'Vols/
↪Aerolinia')

plt.show()
```



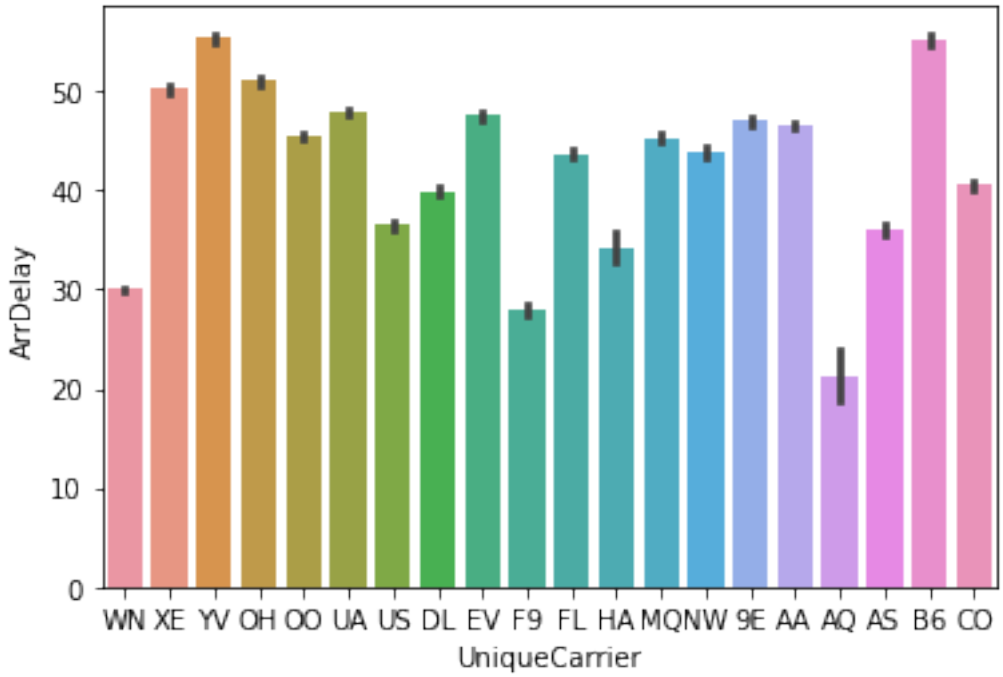
[2]:
```
fig1.get_figure().savefig('fig1.png')
```

[12]:
```
fig2=coses['ArrDelay'].value_counts().plot(kind="hist", title = 'Vols/Pilots␣
↪vagos')

plt.show()
```



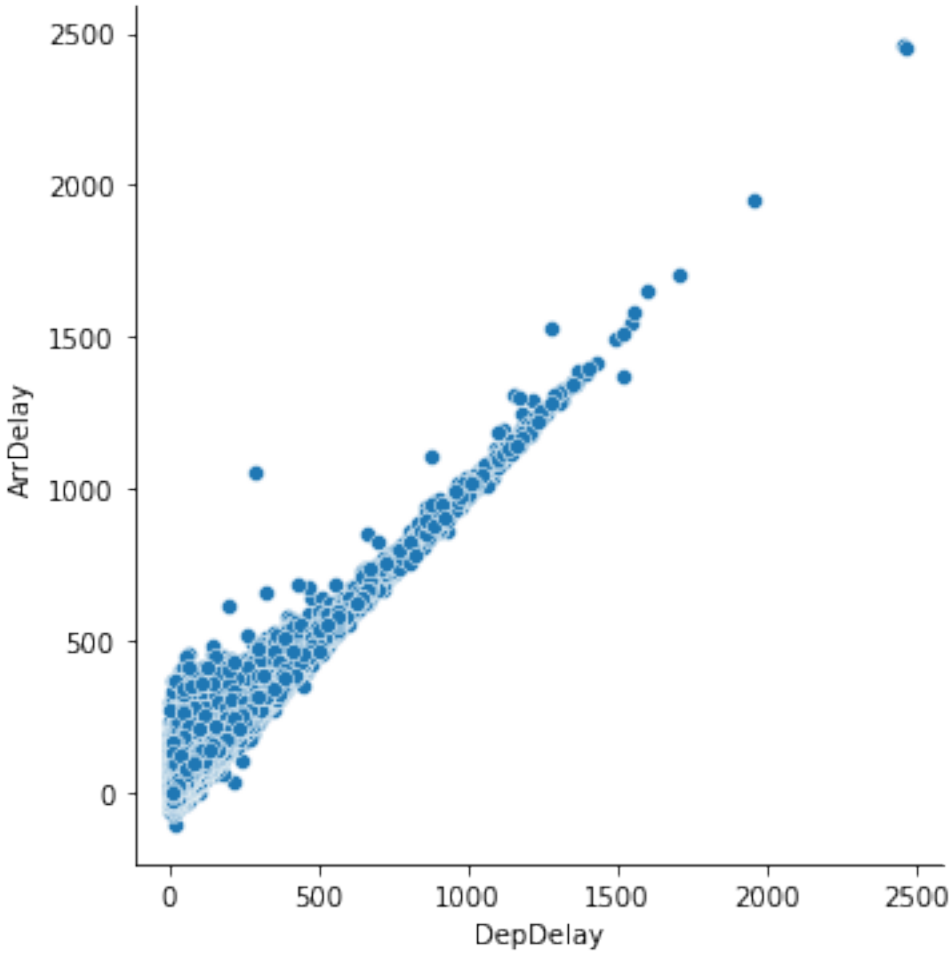
[13]:
```
fig2.get_figure().savefig('fig2.png')
```

[3]:
```
import seaborn as sns

fig3=sns.barplot(y="ArrDelay", x="UniqueCarrier", data=coses)

plt.show()
```



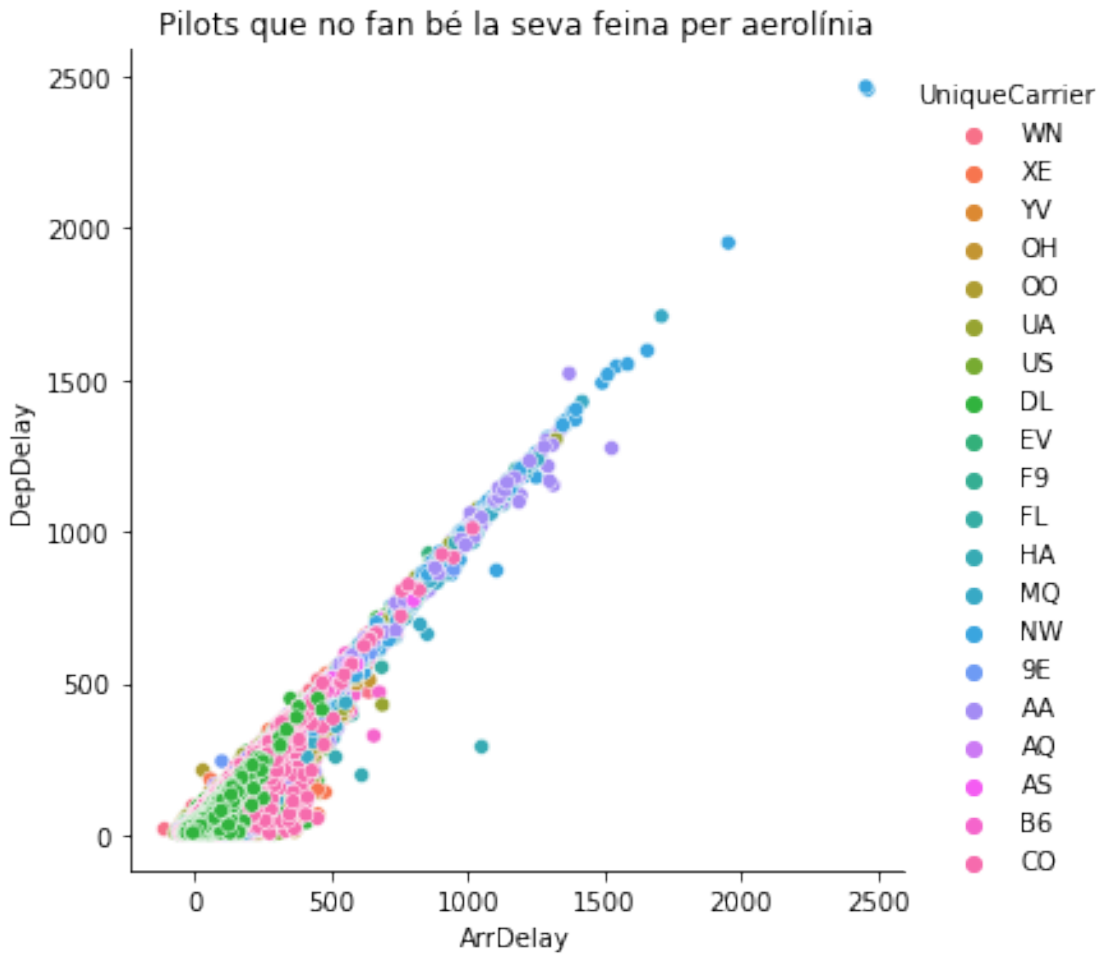
[15]:
```
fig3.get_figure().savefig('fig3.png')
```

[16]:
```
fig4=sns.relplot(y="ArrDelay", x="DepDelay", data=coses)

plt.show()
```



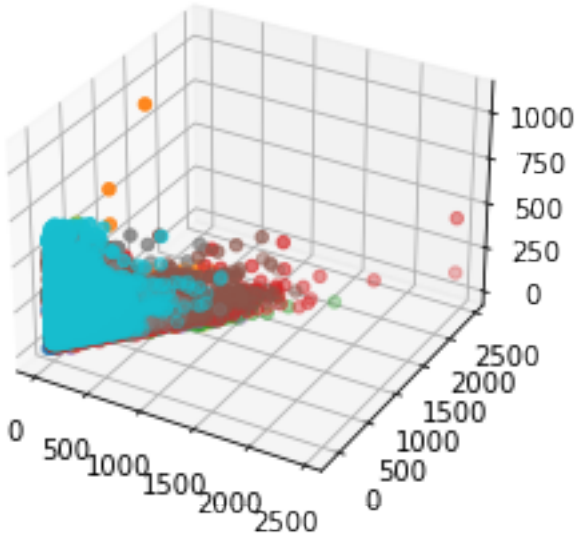
[18]:
```
fig4.savefig('fig4.png')
```

[19]:
```
fig5=sns.relplot(x="ArrDelay", y="DepDelay", hue="UniqueCarrier", data=coses)
plt.title("Pilots que no fan bé la seva feina per aerolínia")
plt.show()
```



[21]:
```
fig5.savefig('fig5.png')
```

[22]:
```
#coses['DepDelay'].value_counts().plot(kind="hist")
#coses['ArrDelay'].value_counts().plot(kind="hist")
#coses['UniqueCarrier'].value_counts().plot(kind="hist")
#coses['AirTime'].value_counts().plot(kind="hist")
#sns.relplot(x="ArrDelay", y="DepDelay", hue="UniqueCarrier", data=coses)
from mpl_toolkits.mplot3d.axes3d import get_test_data

fig = plt.figure(figsize=plt.figaspect(0.5))
ax = fig.add_subplot(1, 2, 1, projection='3d')
for x in coses.UniqueCarrier.unique():
    fig6=ax.scatter(coses.DepDelay[coses.UniqueCarrier==x],coses.ArrDelay[coses.
 ↪UniqueCarrier==x],coses.AirTime[coses.UniqueCarrier==x],label=x)
plt.show()
```



[23]:
```
fig6.get_figure().savefig('fig6.png')
```

2 Exercici 3

[4]:
```
coses["VelocitatMitjanaDeVol"]=coses["Distance"]/coses["AirTime"]
coses["NoCobraPerPuntualitat"]=coses["ArrDelay"]==0
coses[:5]
```

[4]:

	Unnamed: 0	Year	Month	DayofMonth	DayOfWeek	DepTime	CRSDepTime	\
0	0	2008	1	3	4	2003.0	1955	
1	1	2008	1	3	4	754.0	735	
2	2	2008	1	3	4	628.0	620	
3	4	2008	1	3	4	1829.0	1755	
4	5	2008	1	3	4	1940.0	1915	

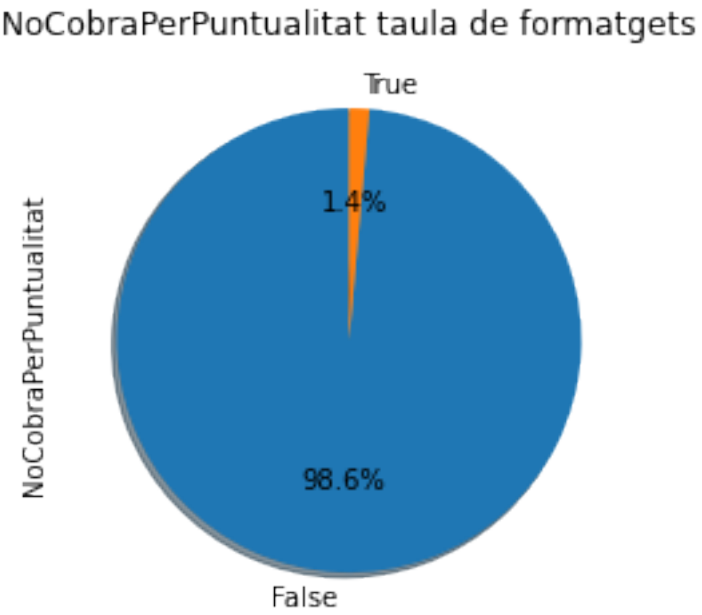
	ArrTime	CRSArrTime	UniqueCarrier	…	Cancelled	CancellationCode	\
0	2211.0	2225	WN	…	0	N	
1	1002.0	1000	WN	…	0	N	
2	804.0	750	WN	…	0	N	
3	1959.0	1925	WN	…	0	N	
4	2121.0	2110	WN	…	0	N	

	Diverted	CarrierDelay	WeatherDelay	NASDelay	SecurityDelay	\
0	0	NaN	NaN	NaN	NaN	
1	0	NaN	NaN	NaN	NaN	
2	0	NaN	NaN	NaN	NaN	

```
3         0           2.0           0.0       0.0           0.0
4         0           NaN           NaN       NaN           NaN

  LateAircraftDelay VelocitatMitjanaDeVol  NoCobraPerPuntualitat
0               NaN              6.982759                  False
1               NaN              7.168142                  False
2               NaN              6.776316                  False
3              32.0              6.688312                  False
4               NaN              7.908046                  False

[5 rows x 32 columns]
```

[6]:
```
locoses["NoCobraPerPuntualitat"].value_counts().pt.pie(autopct='%1.
↪1f%%',shadow=True, startangle=90)
plt.title("NoCobraPerPuntualitat taula de formatgets")
```

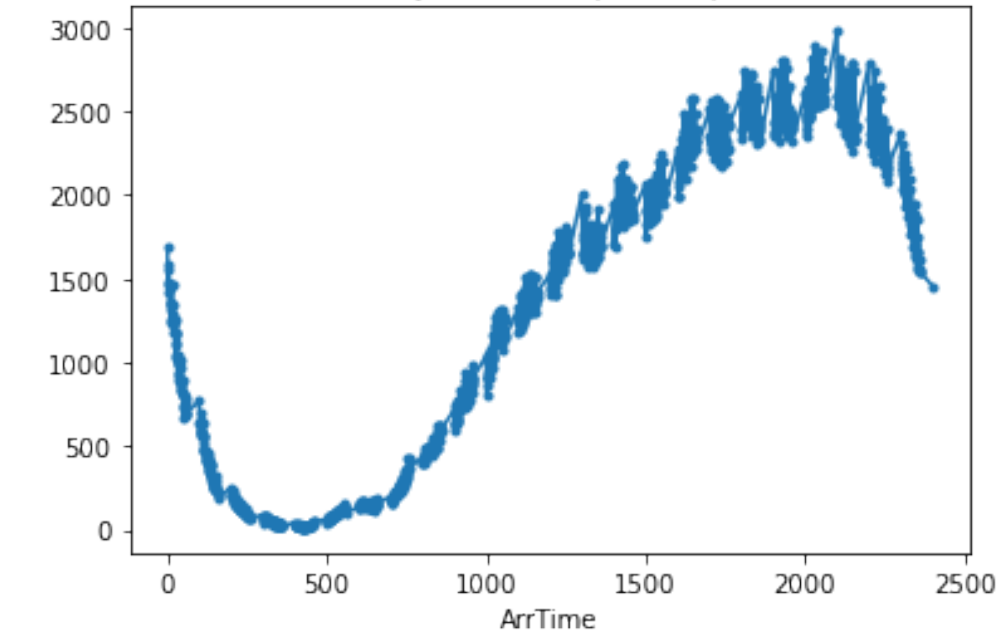
[6]:
```
Text(0.5, 1.0, 'NoCobraPerPuntualitat taula de formatgets')
```



[12]:
```
coses.groupby(by="ArrTime")["VelocitatMitjanaDeVol"].count().plot(marker='.')
plt.title("Doncs això, la velocitat mitjana de vol pel temps d'arribada de cada␣
↪vol")
```

[12]:
```
Text(0.5, 1.0, "Doncs això, la velocitat mitjana de vol pel temps d'arribada de
cada vol")
```

Doncs això, la velocitat mitjana de vol pel temps d'arribada de cada vol



[ ]: