violinplot,lineplot, relplot,clustermap,swarmplot

GitHub Profile Link.

https://github.com/KashafHafeezKhan?tab=repositories

Data Summary:

This file contains different attribute of the candidates educational history and work experience. The detailed data dictionary is given below:

gender: Gender of the candidate

ssc_percentage : Senior secondary exams percentage (10th Grade)

ssc_board : Board of education for ssc exams

hsc_percentage : Higher secondary exams percentage (12th Grade)

hsc_borad : Board of education for hsc exams

hsc_subject : Subject of study for hsc

degree_percentage : Percentage of marks in undergrad degree

undergrad_degree : Undergrad degree majors

work_experience : Past work experience

emp_test_percentage : Aptitude test percentage

specialization : Postgrad degree majors - (MBA specialization)

mba_percent : Percentage of marks in MBA degree

status (TARGET) : Status of placement. Placed / Not Placed

Import libraries:

In [1]:
```
import seaborn as sns
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
```

Read Data:

In [2]:
```
job = pd.read_csv("Job_Placement_Data.csv")
```

call Data:

In [3]:
```
job.head(10)
```

Out[3]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	un
0	M	67.00	Others	91.00	Others	Commerce	58.00	
1	M	79.33	Central	78.33	Others	Science	77.48	
2	M	65.00	Central	68.00	Central	Arts	64.00	
3	M	56.00	Central	52.00	Central	Science	52.00	
4	M	85.80	Central	73.60	Central	Commerce	73.30	
5	M	55.00	Others	49.80	Others	Science	67.25	
6	F	46.00	Others	49.20	Others	Commerce	79.00	
7	M	82.00	Central	64.00	Central	Science	66.00	
8	M	73.00	Central	79.00	Central	Commerce	72.00	
9	M	58.00	Central	70.00	Central	Commerce	61.00	

Data Shape:

In [4]:
```
job.shape
```

Out[4]:
```
(215, 13)
```

Data Info:

In [5]:
```
job.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 215 entries, 0 to 214
Data columns (total 13 columns):
 #   Column               Non-Null Count  Dtype  
---  ------               --------------  -----  
 0   gender               215 non-null    object 
 1   ssc_percentage       215 non-null    float64
 2   ssc_board            215 non-null    object 
 3   hsc_percentage       215 non-null    float64
 4   hsc_board            215 non-null    object 
 5   hsc_subject          215 non-null    object 
 6   degree_percentage    215 non-null    float64
 7   undergrad_degree     215 non-null    object 
 8   work_experience      215 non-null    object 
 9   emp_test_percentage  215 non-null    float64
 10  specialisation       215 non-null    object 
 11  mba_percent          215 non-null    float64
 12  status               215 non-null    object 
dtypes: float64(5), object(8)
memory usage: 22.0+ KB
```

Describe Data:

In [6]:
```
job.describe()
```

Out[6]:

	ssc_percentage	hsc_percentage	degree_percentage	emp_test_percentage	mba_percent
count	215.000000	215.000000	215.000000	215.000000	215.000000
mean	67.303395	66.333163	66.370186	72.100558	62.278186
std	10.827205	10.897509	7.358743	13.275956	5.833385
min	40.890000	37.000000	50.000000	50.000000	51.210000
25%	60.600000	60.900000	61.000000	60.000000	57.945000
50%	67.000000	65.000000	66.000000	71.000000	62.000000
75%	75.700000	73.000000	72.000000	83.500000	66.255000
max	89.400000	97.700000	91.000000	98.000000	77.890000

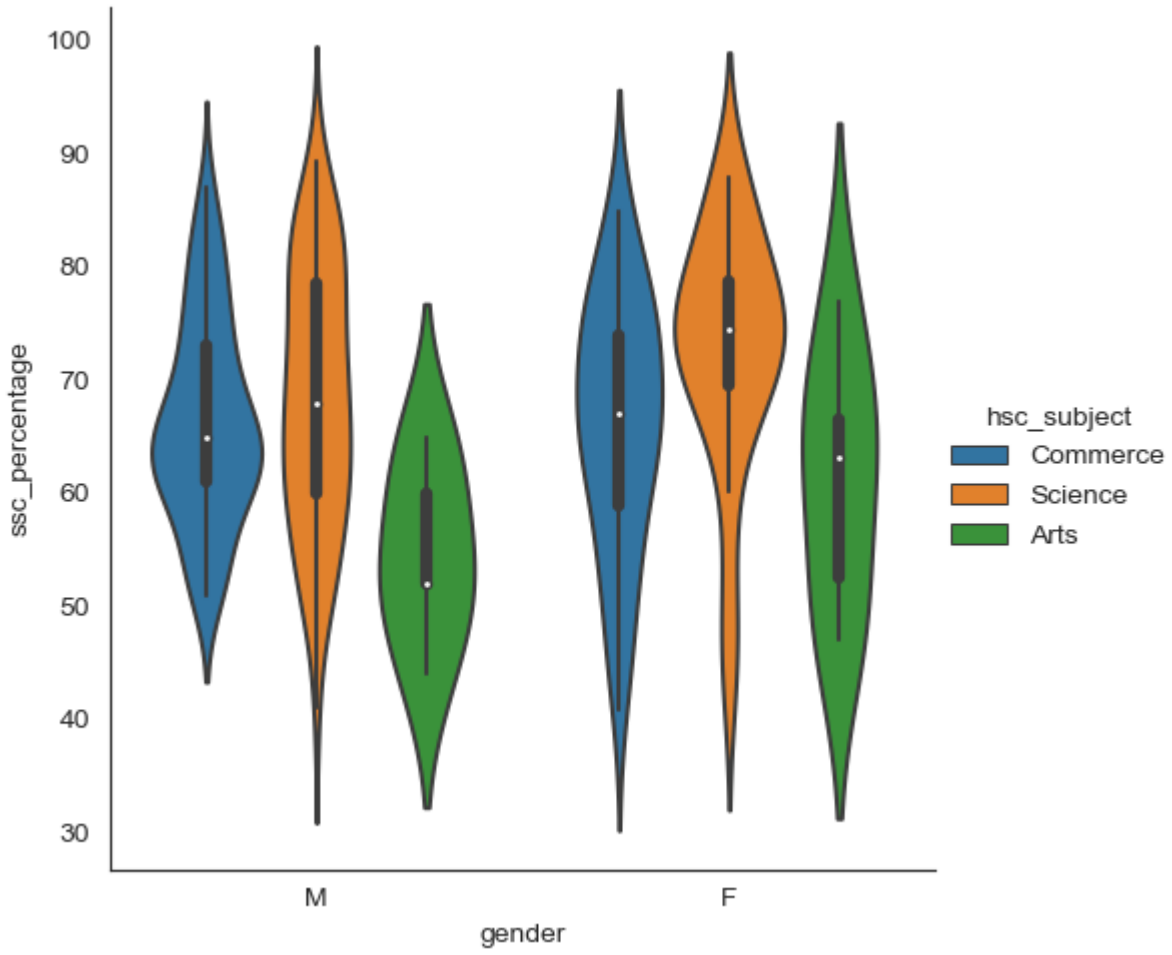
Set Style:

In [7]:
```
sns.set_style("white")
```

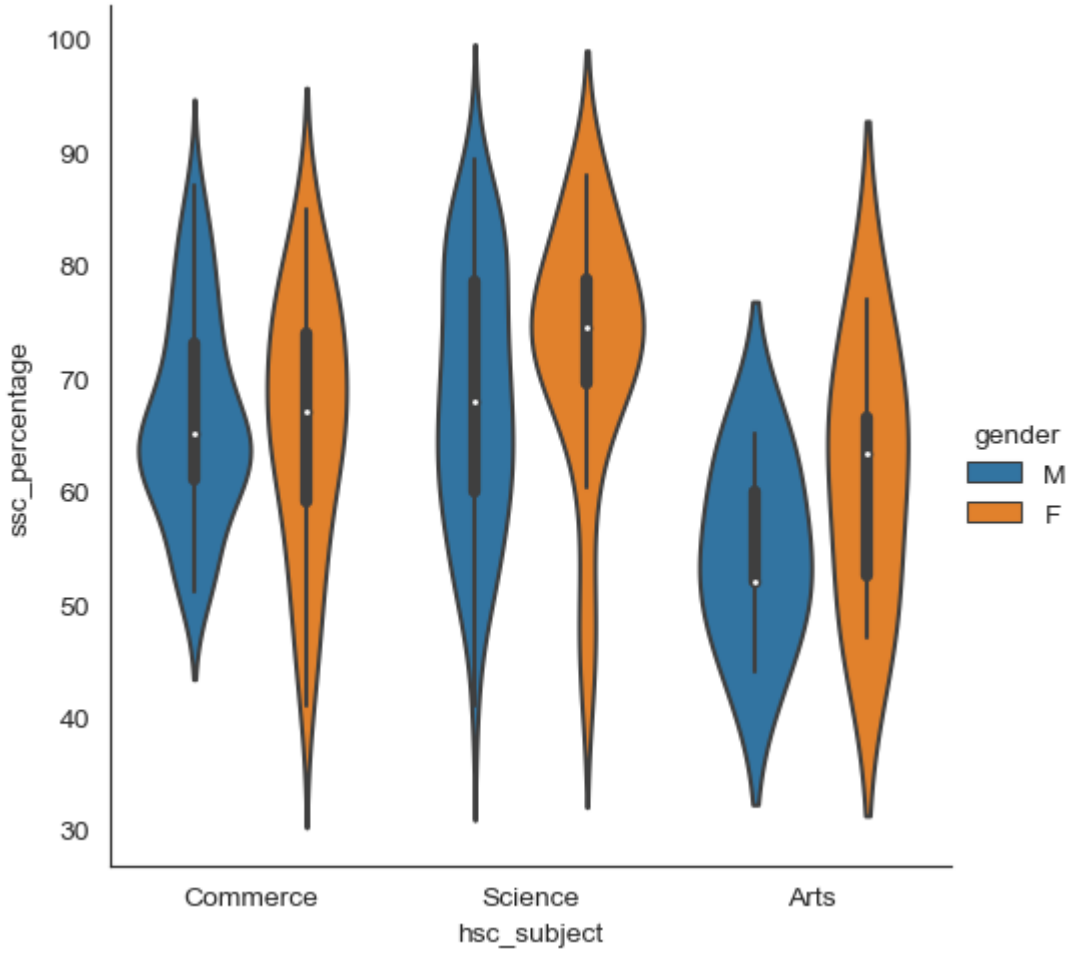
Plotting.

violinplot:

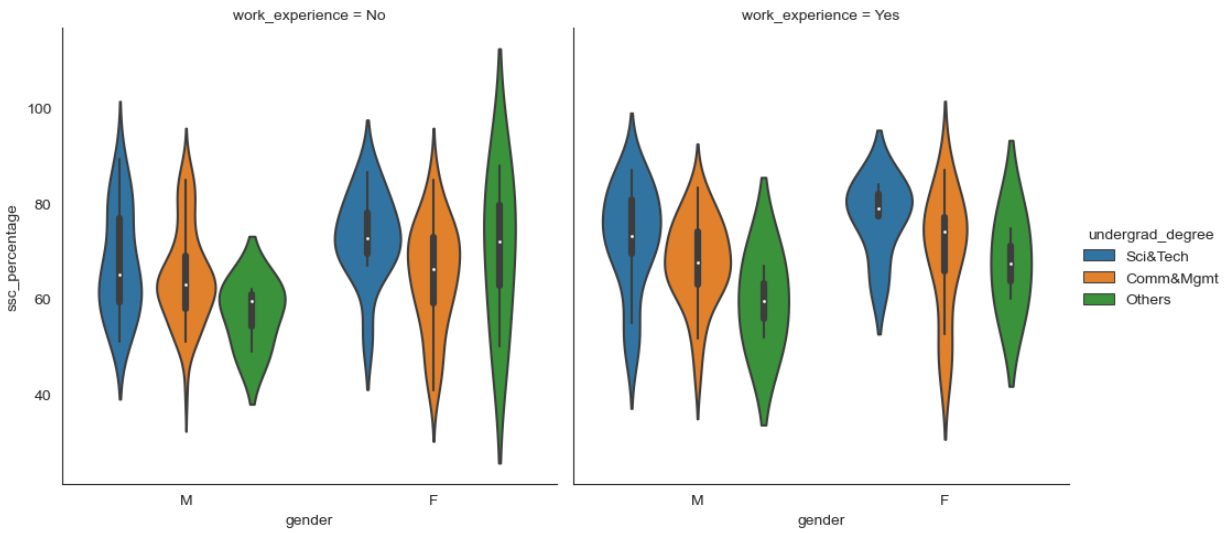
In [8]:
```
sns.catplot(data = job, x='gender',y='ssc_percentage',hue='hsc_subject',kind='violin')
plt.show()
```



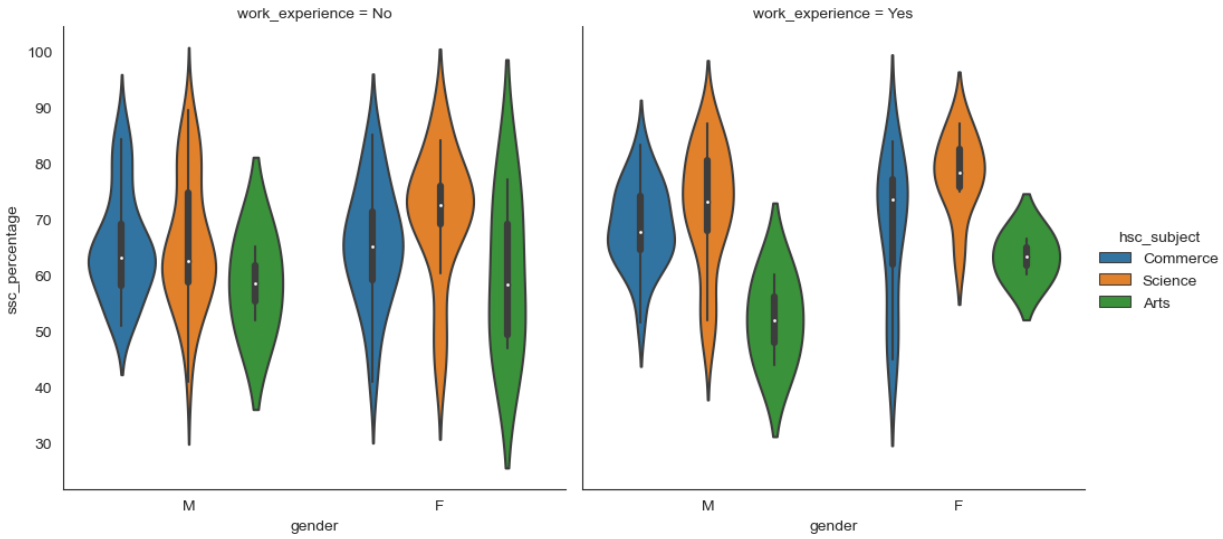
In [9]:
```
sns.catplot(data = job, x='hsc_subject',y='ssc_percentage',hue='gender',kind='violin')
plt.show()
```



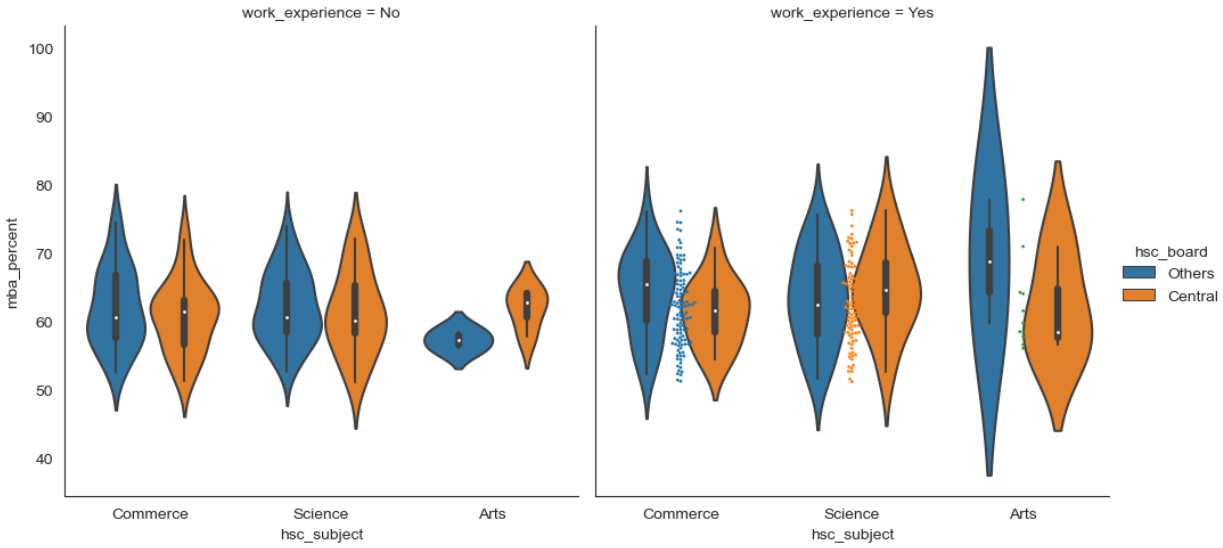
In [10]:
```
sns.catplot(data = job, x='gender',y='ssc_percentage',hue='undergrad_degree', col='wor
plt.show()
```



In [11]:
```
sns.catplot(data = job, x='gender',y='ssc_percentage',hue='hsc_subject', col='work_exp
plt.show()
```

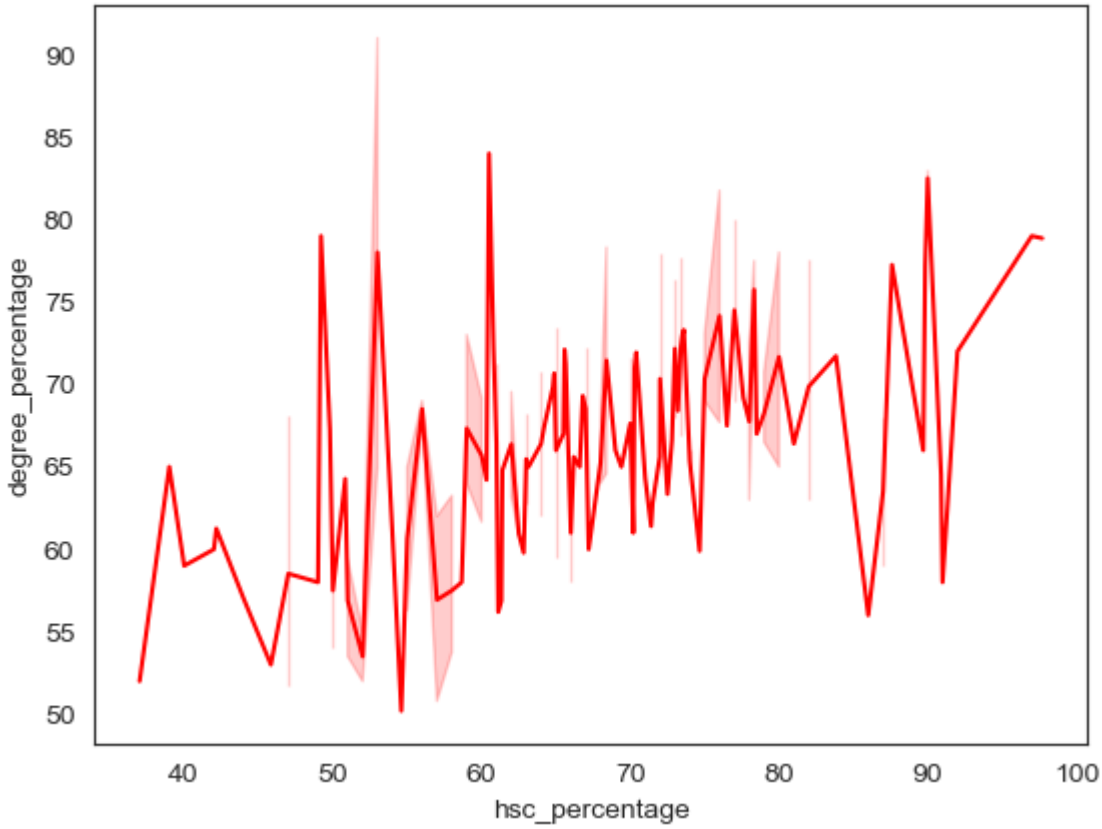


In [12]:
```
sns.catplot(data = job, x='hsc_subject',y='mba_percent',hue='hsc_board',kind='violin',
sns.swarmplot(data = job, x='hsc_subject',y='mba_percent',size=2)
plt.show()
```

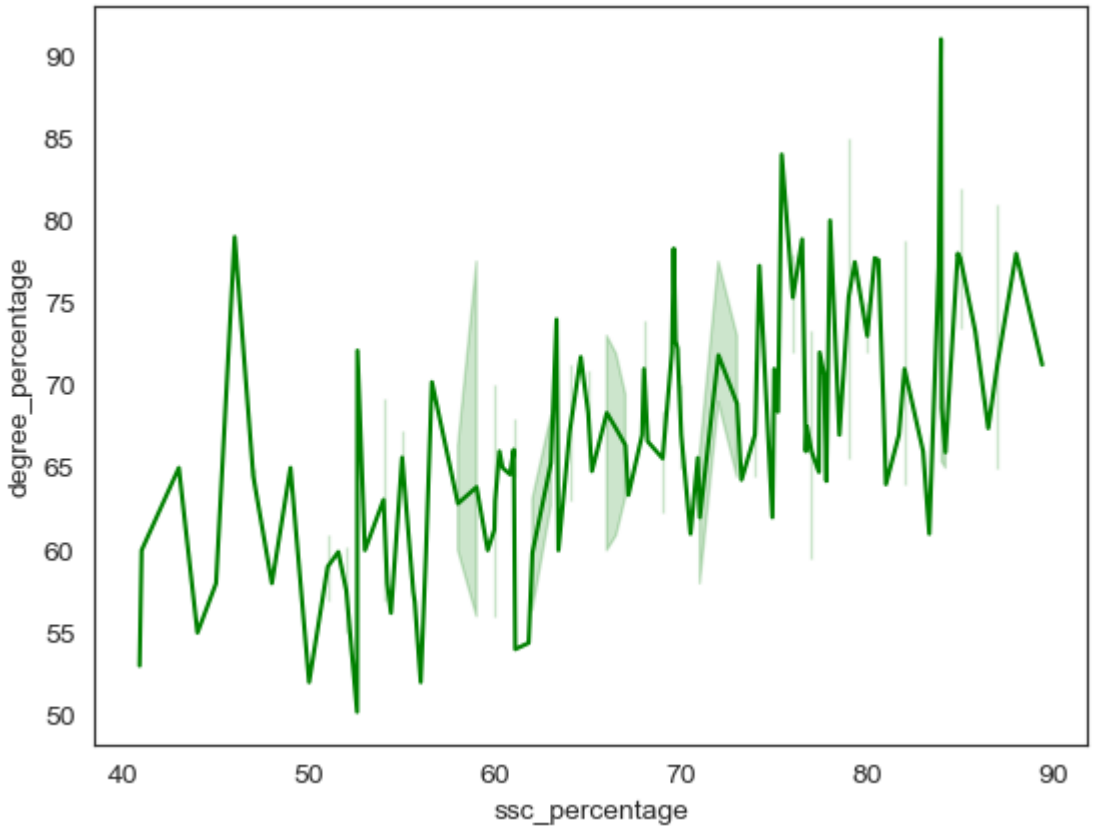


lineplot:

In [13]:
```
sns.lineplot(data=job, x='hsc_percentage',y='degree_percentage', color = 'red')
plt.show()
```

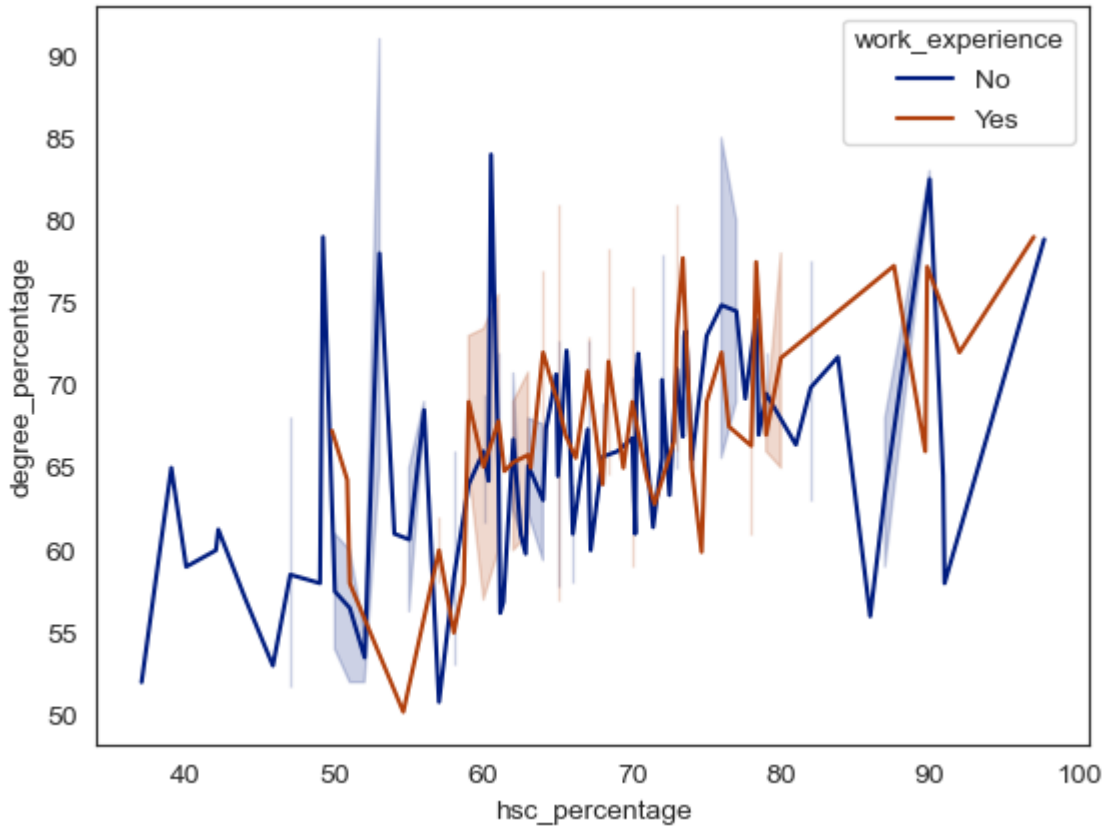


In [14]:
```
sns.lineplot(data=job, x='ssc_percentage',y='degree_percentage', color = 'Green')
plt.show()
```

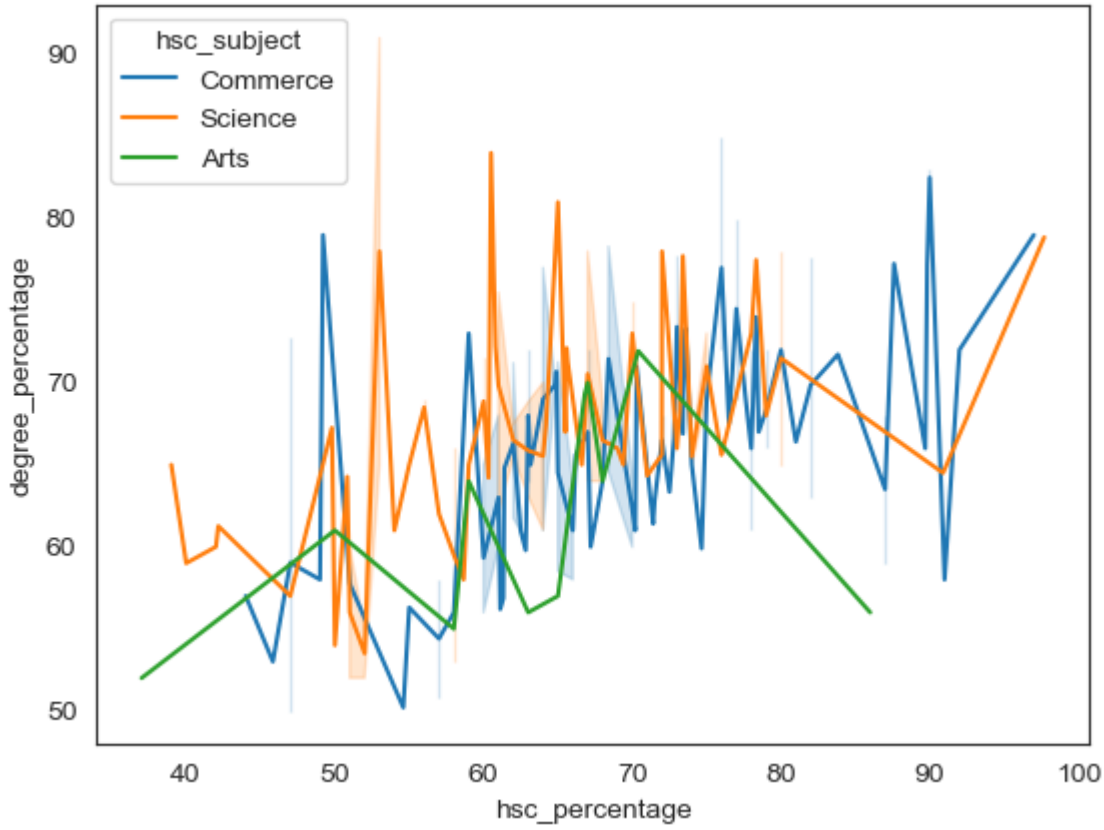


In [15]:
```
sns.lineplot(data=job, x='hsc_percentage',y='degree_percentage', hue='work_experience'
```

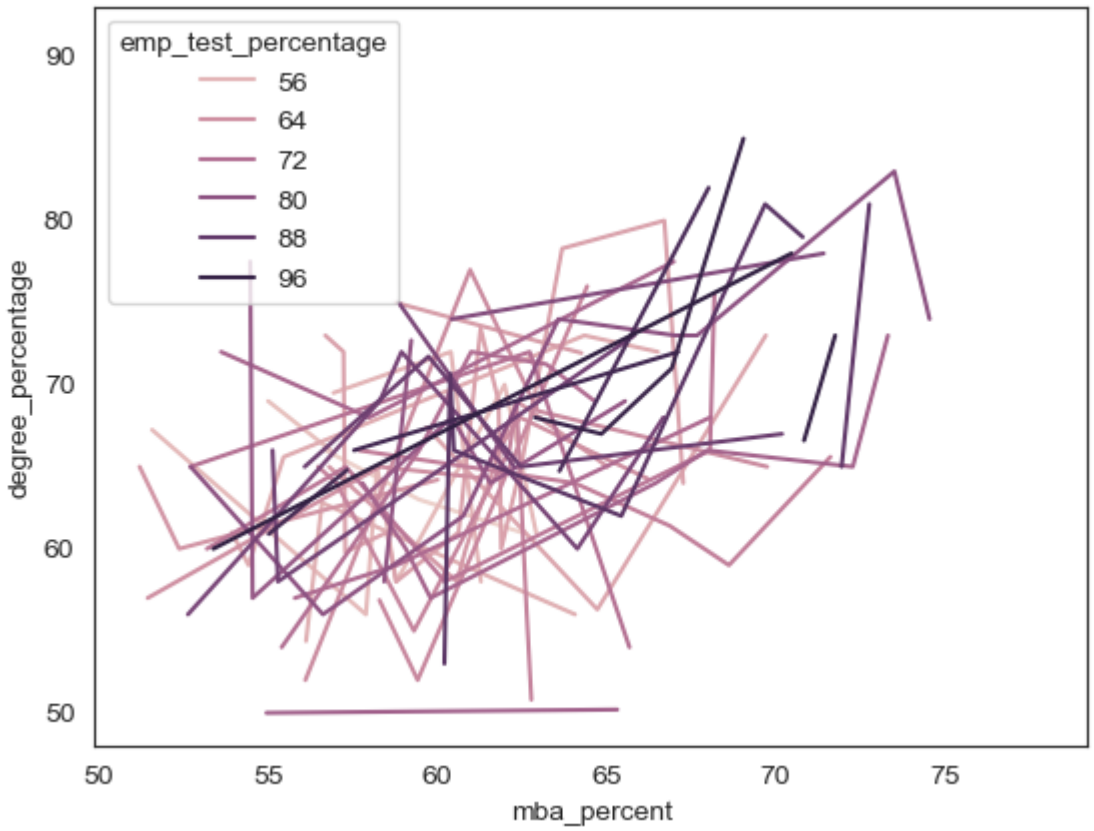
```
plt.show()
```



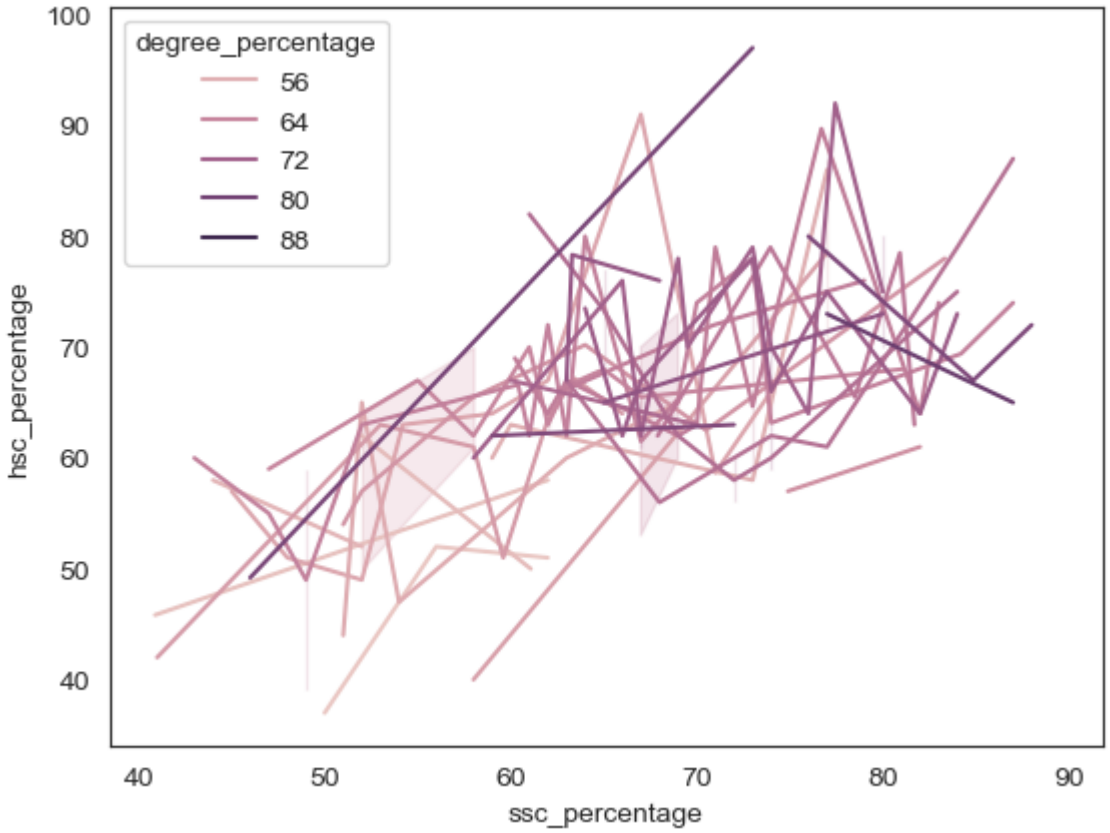
In [16]:
```
sns.lineplot(data = job, x='hsc_percentage',y='degree_percentage',hue='hsc_subject')
plt.show()
```



In [17]:
```
sns.lineplot(data = job, x='mba_percent',y='degree_percentage',hue='emp_test_percentag
plt.show()
```

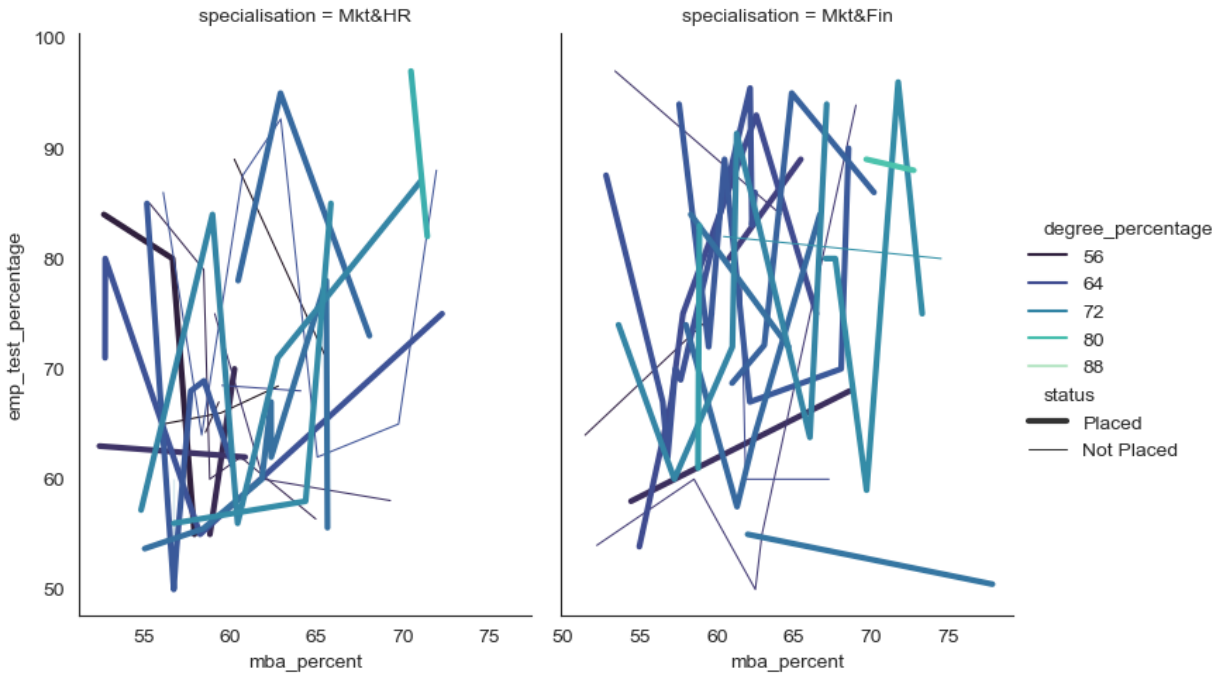


In [18]:
```
sns.lineplot(data = job, x='ssc_percentage',y='hsc_percentage',hue='degree_percentage'
plt.show()
```



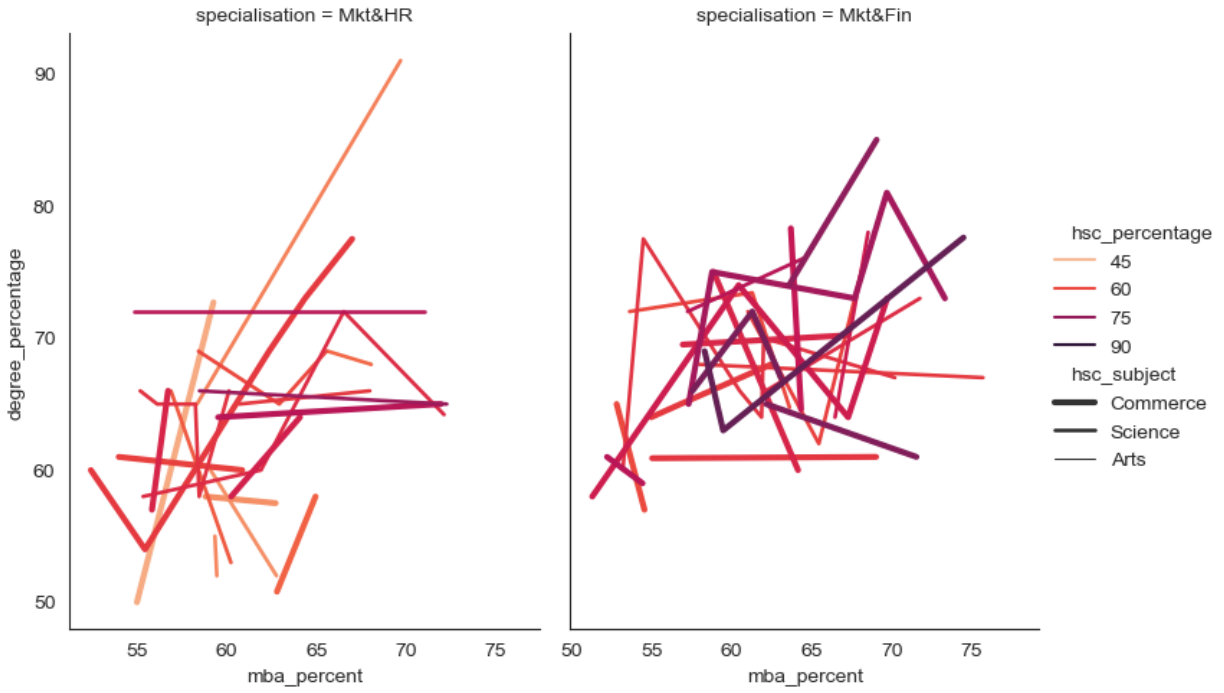
relplot:

In [19]:
```
sns.relplot(data=job, x='mba_percent', y='emp_test_percentage', hue='degree_percentage
            kind="line", size_order=["Placed", "Not Placed"], palette='mako', height=5
plt.show()
```

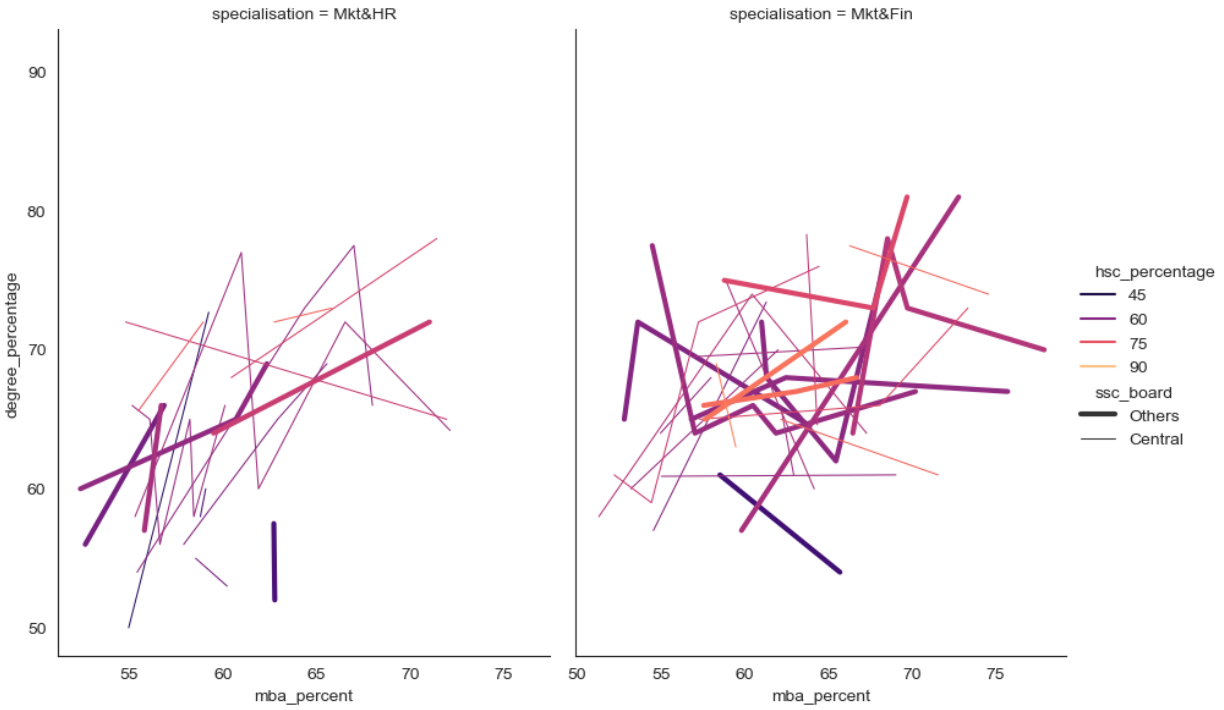


In [20]:
```
sns.relplot(data=job, x='mba_percent', y='degree_percentage', hue='hsc_percentage', si
            kind="line", size_order=["Commerce", "Science", "Arts"], palette='rocket_r
```

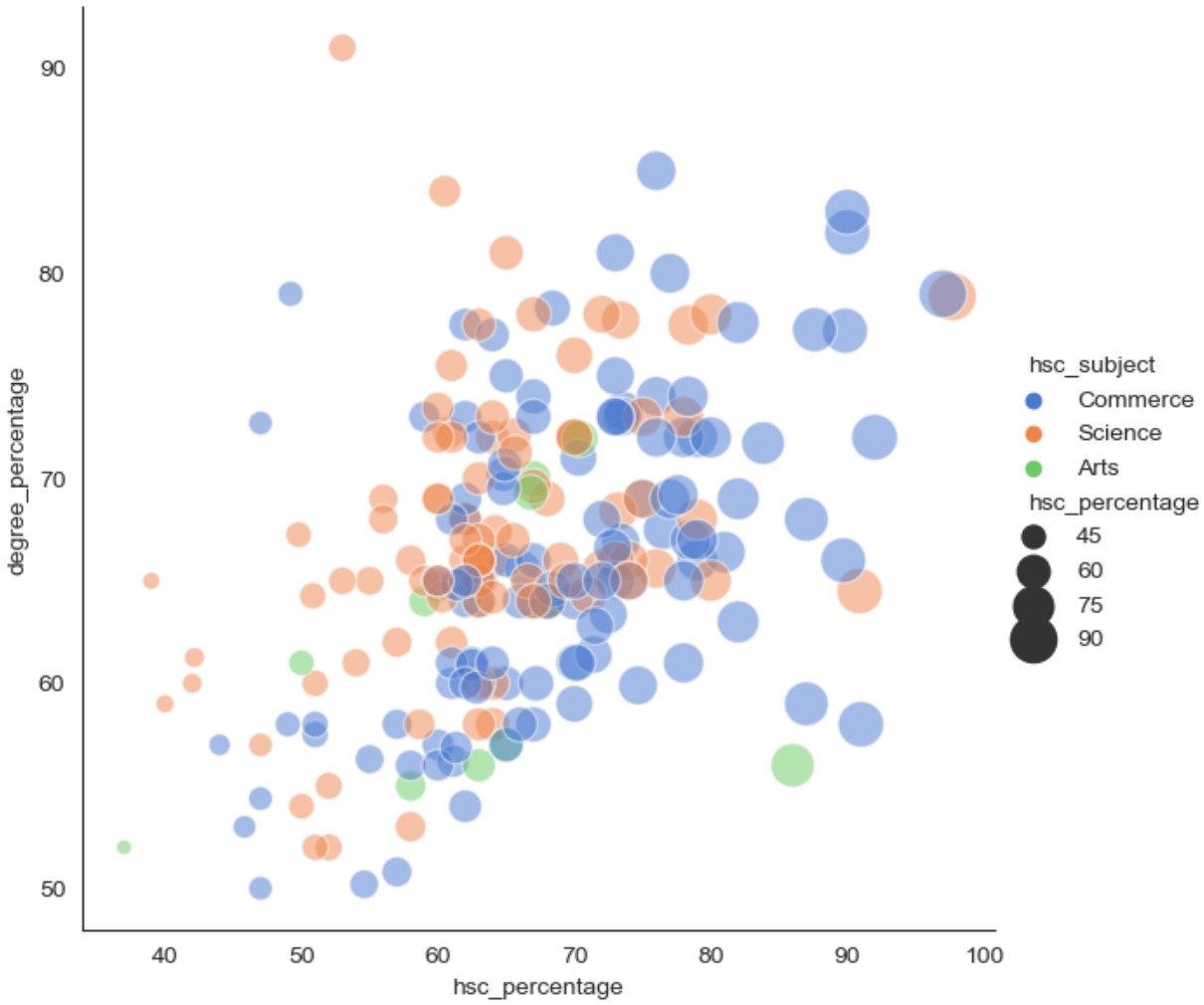
```
plt.show()
```



In [21]:
```
sns.relplot(data=job, x='mba_percent', y='degree_percentage', hue='hsc_percentage', si
            kind="line", size_order=["Others", "Central"], palette='magma', height=6,
plt.show()
```

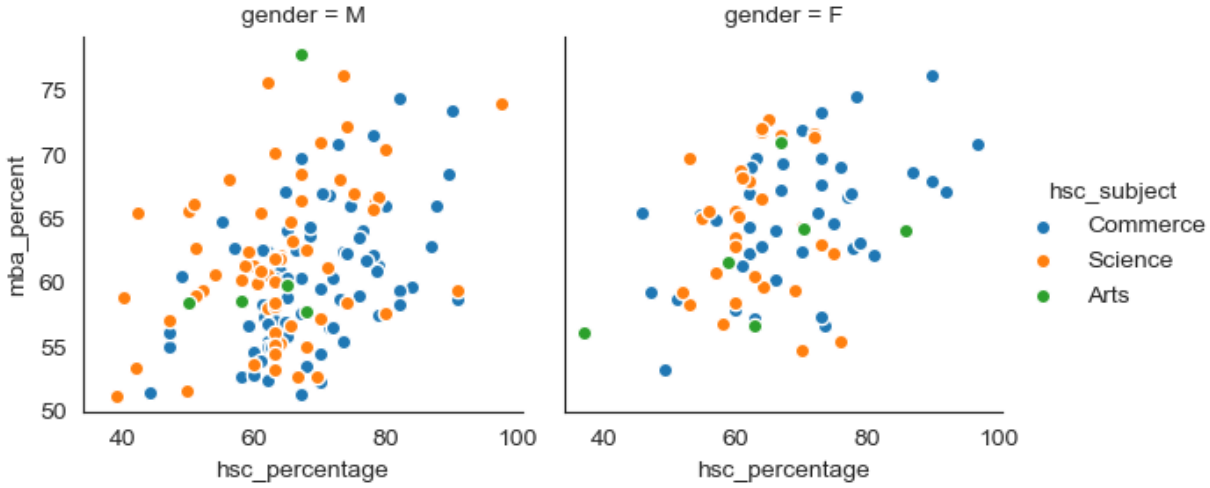


In [22]:
```
sns.relplot( x='hsc_percentage',y='degree_percentage',hue='hsc_subject', size='hsc_per
            palette="muted", height=6, data=job)
plt.show()
```

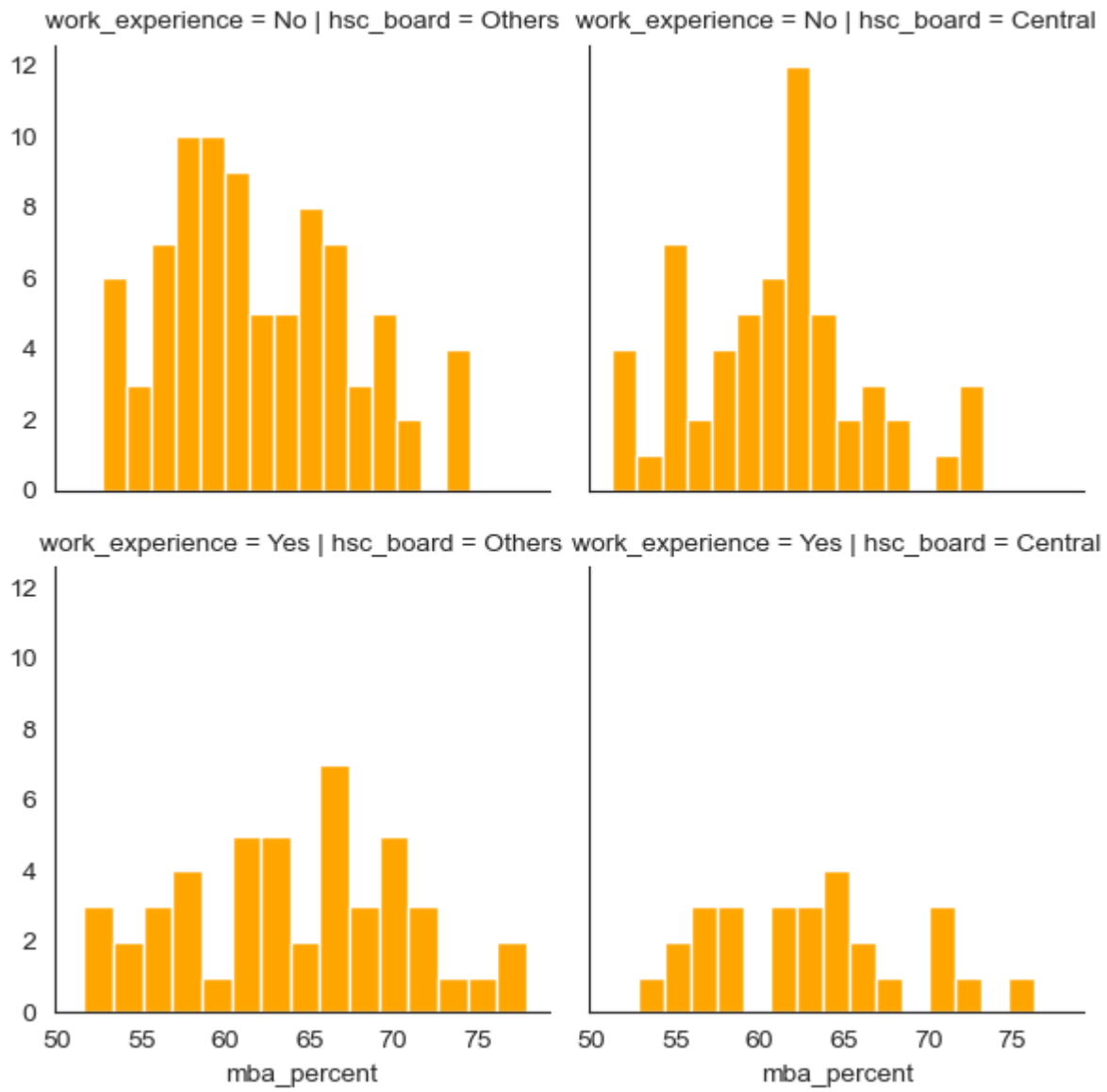


Facetgrid:

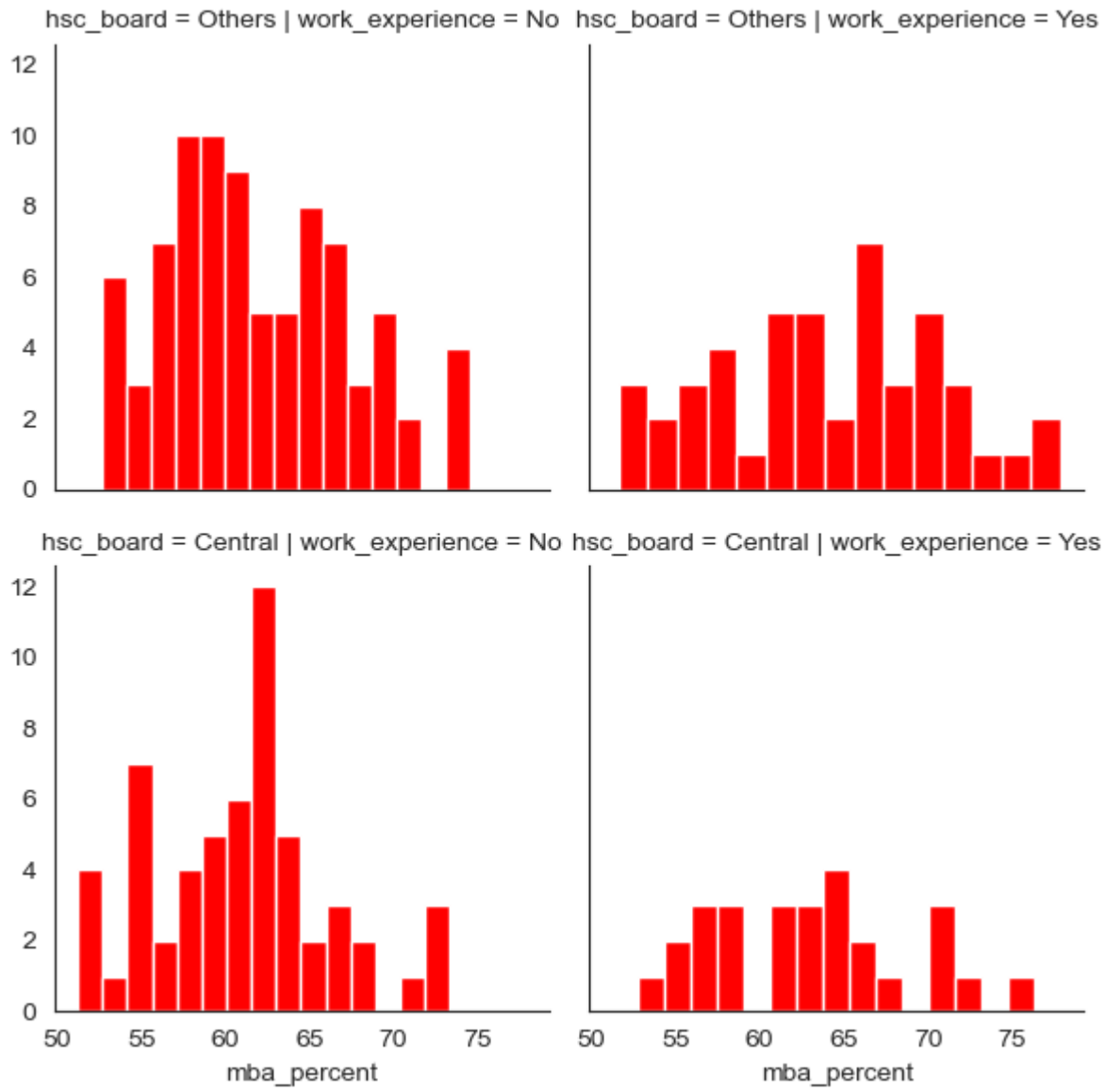
In [23]:
```
graph=sns.FacetGrid(job, col ="gender",  hue ="hsc_subject")
graph.map(plt.scatter, "hsc_percentage", "mba_percent", edgecolor ="w").add_legend()
plt.show()
```



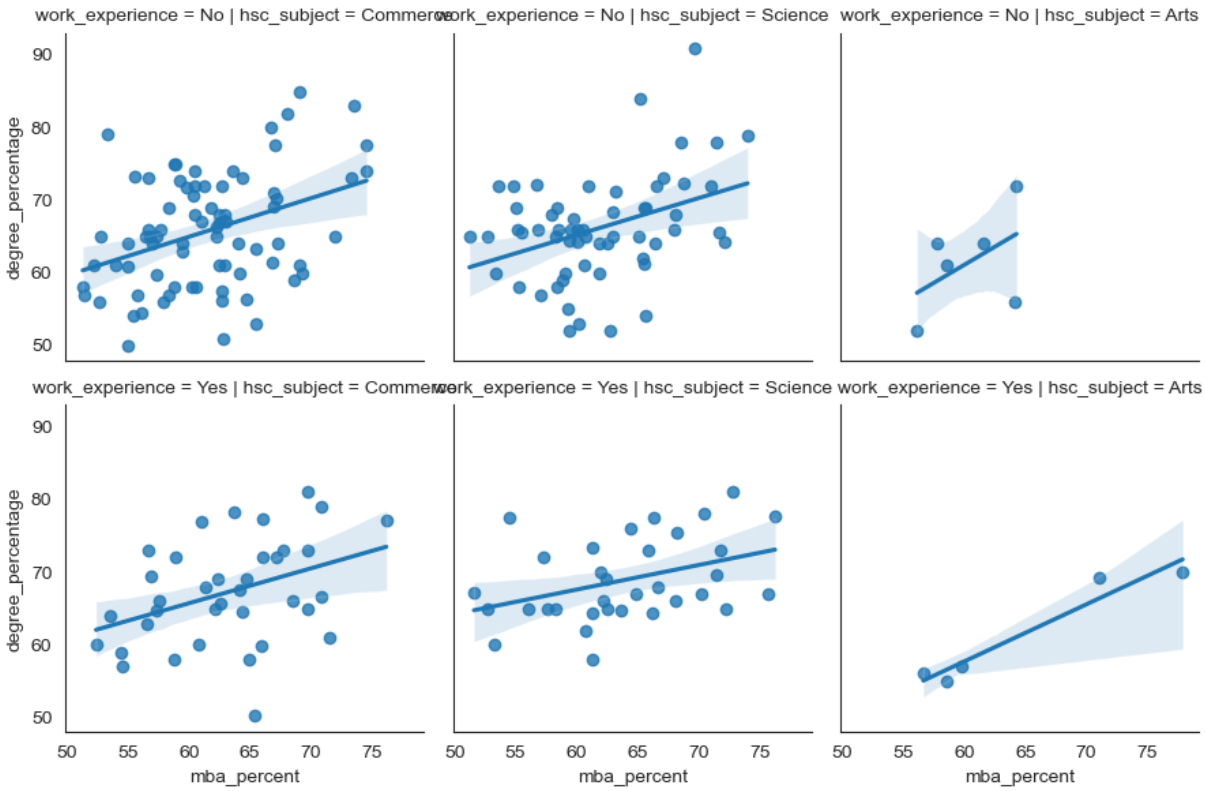
In [24]:
```
graph = sns.FacetGrid(job, row ='work_experience', col ='hsc_board')
graph.map(plt.hist, "mba_percent", bins = 15, color ='orange')
plt.show()
```



In [25]:
```
graph = sns.FacetGrid(job, col ='work_experience', row ='hsc_board')
graph.map(plt.hist, "mba_percent", bins = 15, color ='Red')
plt.show()
```

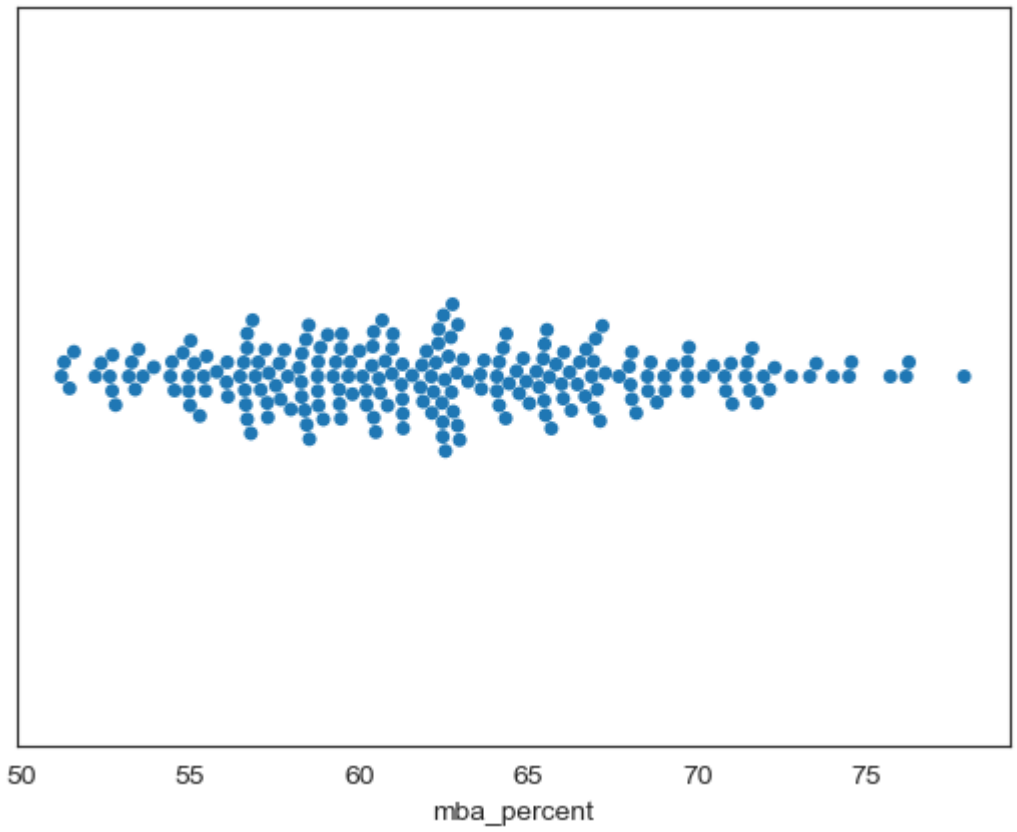


In [26]:
```
graph = sns.FacetGrid(job, col ='hsc_subject', row ='work_experience')
graph.map(sns.regplot, "mba_percent", "degree_percentage").add_legend()
plt.show()
```

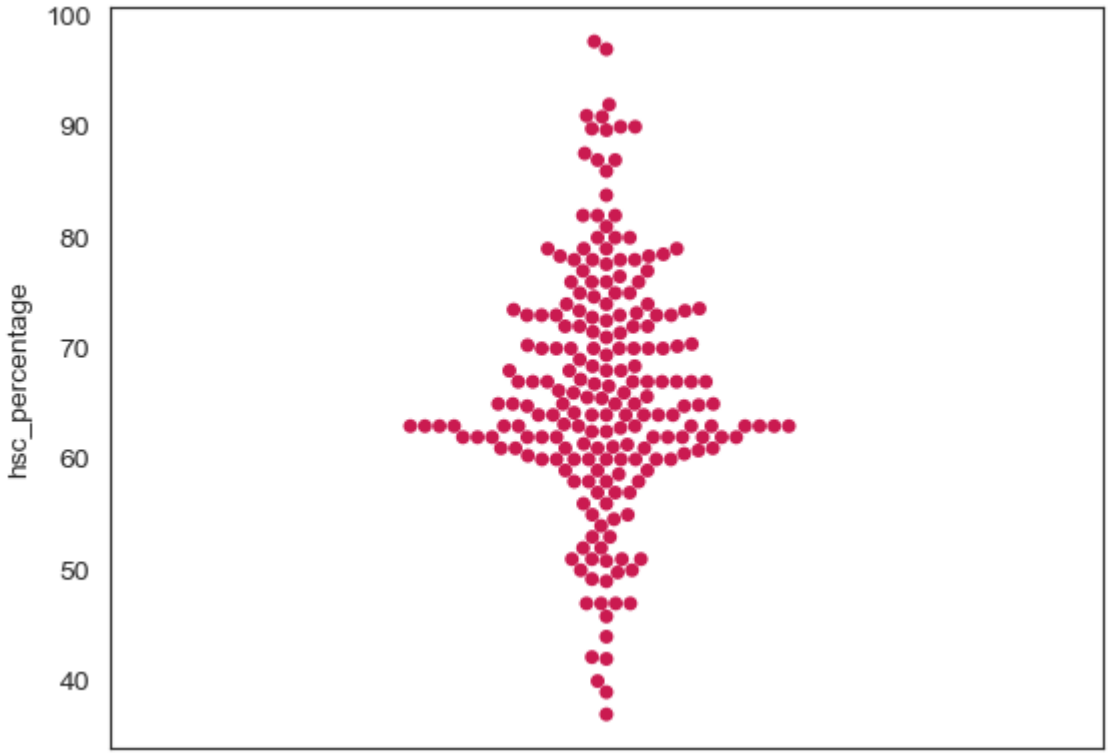


swarmplot:

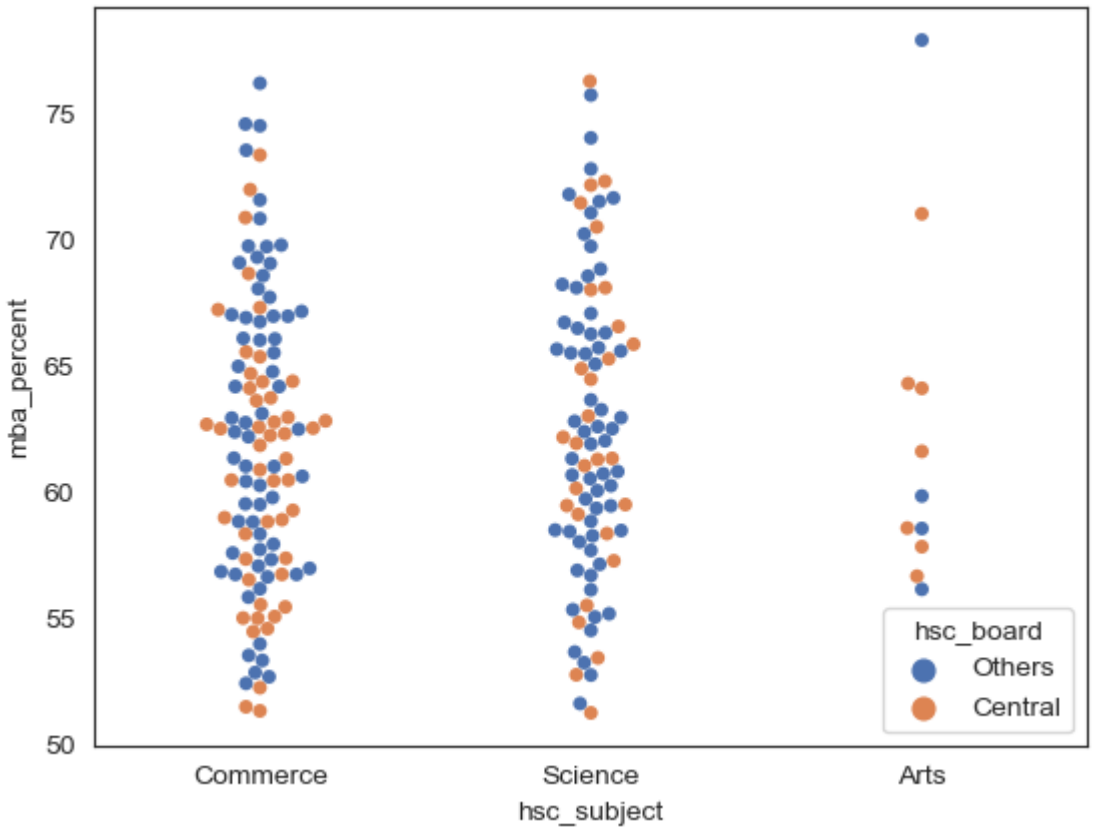
In [27]:
```
sns.swarmplot(data=job, x="mba_percent")
plt.show()
```



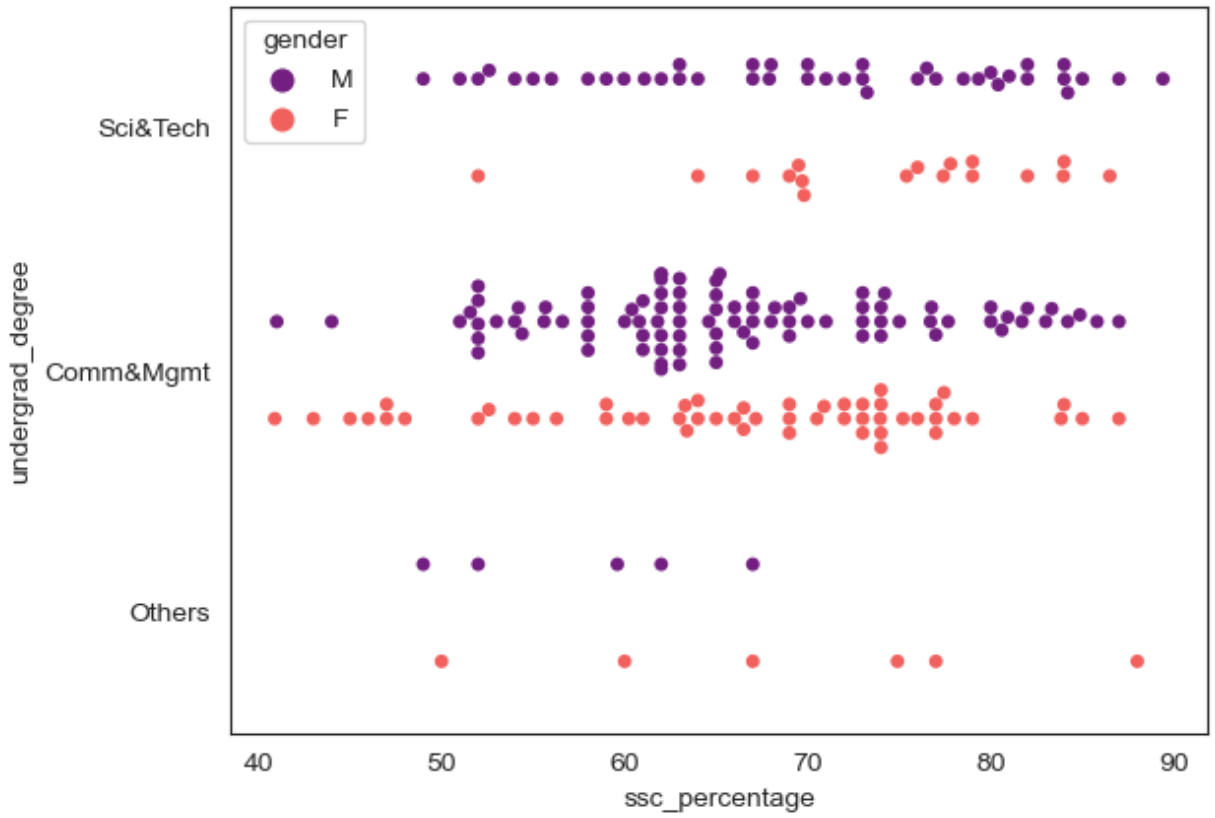
In [28]:
```
sns.swarmplot(data=job, y="hsc_percentage", palette='rocket_r')
plt.show()
```



In [29]:
```
sns.swarmplot(data = job, x='hsc_subject',y='mba_percent',hue='hsc_board', palette="de
plt.show()
```

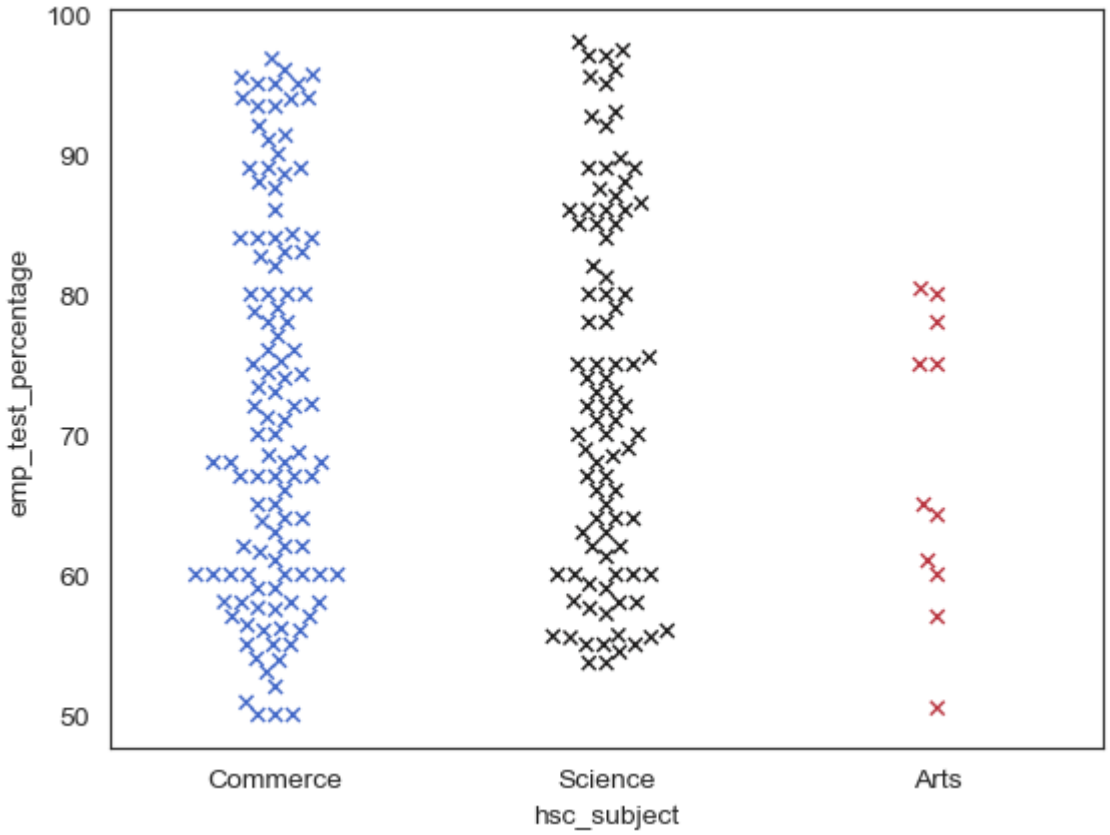


In [30]:
```
sns.swarmplot(data=job, x="ssc_percentage", y="undergrad_degree", hue="gender", dodge=
plt.show()
```



In [31]:
```
sns.swarmplot(data=job, x='hsc_subject', y='emp_test_percentage',  marker="x", linewic
plt.show()
```

```
E:\New folder\lib\site-packages\seaborn\categorical.py:1376: UserWarning: You passed
a edgecolor/edgecolors ('#121212') for an unfilled marker ('x').  Matplotlib is ignor
ing the edgecolor in favor of the facecolor.  This behavior may change in the future.
  points = ax.scatter(cat_pos, swarm_data, s=s, **kws)
```



In [32]:
```
sns.catplot(data=job, kind="swarm", y="hsc_percentage", x="hsc_subject", hue="gender",
plt.show()
```