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#!/usr/bin/python3
import matplotlib.pyplot as plt
import pandas as pd
df = pd.read_csv('emp-dep.csv', dtype={'phone1':str, 'phone2':str})
#t1
x = df['age']
y = df['salary']
plt.scatter(x,y)
plt.show()
dep_counts = df['dname'].value_counts().sort_index()
dep_counts.plot(kind='bar')
plt.show()
dep_counts.plot(kind='barh')
plt.show
#t2
df= pd.read_csv('./emp-dep.csv')
df.groupby(['age_group']).size().plot.bar()
plt.show()
#t3
df = pd.read_csv('./emp-dep.csv')
gender_count = df['gender'].value_counts()
gender_count.plot(kind='pie', ylabel="", labels=['miehet', 'naiset'], autopct='%1.1f%%',
startangle=270, title="Työntekijöiden osuus")
plt.show()
fig, ax = plt.subplots()
cag = df.groupby(['age_group', 'gender']).size().unstack()
ticks = []
for t in range(0, int(cag.max().sum())):
ticks.append(t)
ax = cag.plot(kind='bar')
ax.legend(['miehet', 'naiset'])
plt.yticks(ticks=ticks)
plt.yticks(ticks=ticks)
plt.xlabel('Ikäryhmä')
plt.ylabel('Lukumäärä')
plt.title('Työntekijät ikäryhmittäin', fontsize=13)
plt.show()
#t4
#!/usr/bin/python3
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
df = pd.read_csv('titanic.csv')
age_groups = np.arange(5, 76, 5)
df['age_group'] = df.apply(lambda row: age_groups[np.where(age_groups > row.Age)[0]
[0]], axis=1)
counts = df.age_group.value_counts().sort_index()
counts.plot(kind='bar')
plt.show()
total = len(df)
survived = df.query("Survived == 1")
plot_data = survived.GenderCode.value_counts()

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plot_data.plot(kind='pie', ylabel="", labels=['miehet', 'naiset'], autopct='%1.1f%%',
startangle=270, title=f""")
matkustajia: {total}
selviytyneet miehet: {plot_data[0]}
selviytyneet naiset: {plot_data[1]}
""")
plt.show()
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