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E1_507

Practical 3

INPUT:

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from numpy.core.fromnumeric import mean
import numpy as np
array=np.loadtxt("/content/testmarks1.csv",delimiter=',',dtype=str,skip
rows=1)
print(array)
EDS=[]
SON=[]
DT=[]
ET=[]
for i in array:
  EDS.append(float(i[1]))
  SON.append(float(i[2]))
  DT.append(float(i[3]))
  ET.append(float(i[4]))
print(EDS)
print(SON)
print(DT)
print(ET)
arr_EDS=np.array(EDS)
arr_SON=np.array(SON)
arr_DT=np.array(DT)
arr_ET=np.array(ET)
max_EDS=max(arr_EDS)
max_SON=max(arr_SON)
max_DT=max(arr_DT)
max_ET=max(arr_ET)
print("Max mraks in EDS:",max_EDS)
print("Max mraks in SON:",max_SON)
print("Max mraks in DT:",max_DT)
print("Max mraks in ET:",max_ET)
min_EDS=min(arr_EDS)
min_SON=min(arr_SON)
min_DT=min(arr_DT)
min_ET=min(arr_ET)
print("Min mraks in EDS:",min_EDS)
print("Min mraks in SON:",min_SON)
print("Min mraks in DT:",min_DT)
print("Min mraks in ET:",min_ET)
sum_EDS=np.sum(arr_EDS)
sum_SON=np.sum(arr_SON)
sum_DT=np.sum(arr_DT)
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sum_ET=np.sum(arr_ET)
print("Summation of EDS :",sum_EDS)
print("Summation of SON :",sum_SON)
print("Summation of DT :",sum_DT)
print("Summation of ET :",sum_ET)
med_EDS=np.median(arr_EDS)
med_SON=np.median(arr_SON)
med_DT=np.median(arr_DT)
med_ET=np.median(arr_ET)
print("Median of EDS:",med_EDS)
print("Median of SON:",med_SON)
print("Median of DT:",med_DT)
print("Median of ET:",med_ET)
std_EDS=np.std(arr_EDS)
std_SON=np.std(arr_SON)
std_DT=np.std(arr_DT)
std_ET=np.std(arr_ET)
print("Standard Deviation of EDS:",std_EDS)
print("Standard Deviation of SON:",std_SON)
print("Standard Deviation of DT:",std_DT)
print("Standard Deviation of ET:",std_ET)
var_EDS=np.var(arr_EDS)
var_SON=np.var(arr_SON)
var_DT=np.var(arr_DT)
var_ET=np.var(arr_ET)
print("Variance of EDS :",var_EDS)
print("Variance of SON :",var_SON)
print("Variance of DT :",var_DT)
print("Variance of ET :",var_ET)
mean_EDS=np.mean(arr_EDS)
mean_SON=np.mean(arr_SON)
mean_DT=np.mean(arr_DT)
mean_ET=np.mean(arr_ET)
print("Mean of EDS:",mean_EDS)
print("Mean of SON:",mean_SON)
print("Mean of DT:",mean_DT)
print("Mean of ET:",mean_ET)
sort_EDS=np.sort(arr_EDS)
sort_SON=np.sort(arr_SON)
sort_DT=np.sort(arr_DT)
sort_ET=np.sort(arr_ET)
print("Sorting of EDS:",sort_EDS)
print("Sorting of SON:",sort_SON)
print("Sorting of DT:",sort_DT)
print("Sorting of ET:",sort_ET)
searchA=np.where(arr_EDS==43.05)
searchB=np.where(arr_SON==26.03)
searchC=np.where(arr_DT==27.79)
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searchD=np.where(arr_ET==28.19)
print("SEARCH FOR EDS:",searchA)
print("SEARCH FOR SON:",searchB)
print("SEARCH FOR DT:",searchC)
print("SEARCH FOR ET:",searchD)
```

output:

```
[['801' '43.05' '27.79' '28.7' '27.79']
 ['802' '43.47' '28.52' '28.98' '27.89']
 ['803' '42.24' '28.16' '28.16' '25.63']
 ['804' '39.24' '26.16' '26.16' '26.16']
 ['805' '40.9' '26.03' '27.27' '25.65']
 ['806' '39.47' '26.31' '26.31' '25.21']
 ['807' '41.68' '25.63' '27.79' '25.46']
 ['808' '42.19' '27.61' '28.13' '26.21']
 ['809' '44.75' '28.35' '29.83' '28.21']
 ['810' '46.95' '28.88' '31.3' '28.53']]
[43.05, 43.47, 42.24, 39.24, 40.9, 39.47, 41.68, 42.19, 44.75, 46.95]
[27.79, 28.52, 28.16, 26.16, 26.03, 26.31, 25.63, 27.61, 28.35, 28.88]
[28.7, 28.98, 28.16, 26.16, 27.27, 26.31, 27.79, 28.13, 29.83, 31.3]
[27.79, 27.89, 25.63, 26.16, 25.65, 25.21, 25.46, 26.21, 28.21, 28.53]
Max mraks in EDS: 46.95
Max mraks in SON: 28.88
Max mraks in DT: 31.3
Max mraks in ET: 28.53
Min mraks in EDS: 39.24
Min mraks in SON: 25.63
Min mraks in DT: 26.16
Min mraks in ET: 25.21
Summation of EDS : 423.94
Summation of SON : 273.44
Summation of DT : 282.63
Summation of ET : 266.74
Median of EDS: 42.215
Median of SON: 27.7
Median of DT: 28.145
Median of ET: 26.185000000000002
Standard Deviation of EDS: 2.2181217279491228
Standard Deviation of SON: 1.1324857614998962
Standard Deviation of DT: 1.4784725225718605
Standard Deviation of ET: 1.2150407400577152
Variance of EDS : 4.920064000000002
Variance of SON : 1.282524
Variance of DT : 2.1858810000000006
Variance of ET : 1.4763240000000004
Mean of EDS: 42.394
Mean of SON: 27.344
Mean of DT: 28.262999999999998
Mean of ET: 26.674
Sorting of EDS: [39.24 39.47 40.9  41.68 42.19 42.24 43.05 43.47 44.75
46.95]
Sorting of SON: [25.63 26.03 26.16 26.31 27.61 27.79 28.16 28.35 28.52
28.88]
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Sorting of DT: [26.16 26.31 27.27 27.79 28.13 28.16 28.7  28.98 29.83
31.3 ]
Sorting of ET: [25.21 25.46 25.63 25.65 26.16 26.21 27.79 27.89 28.21
28.53]
SEARCH FOR EDS: (array([0]),)
SEARCH FOR SON: (array([4]),)
SEARCH FOR DT: (array([6]),)
SEARCH FOR ET: (array([], dtype=int64),)
```