Part I: PANDAS

[11]:

	age	anaemia	creatinine_phosphokinase	diabetes	ejection_fraction	high_blood_pressure	platelets	serum_creatinine	serum_sodium	sex	smoking	time	DEATH_EVENT
0	75.0	0	582	0	20	1	265000.00	1.9	130	1	0	4	1
1	55.0	0	7861	0	38	0	263358.03	1.1	136	1	0	6	1
2	65.0	0	146	0	20	0	162000.00	1.3	129	1	1	7	1
3	50.0	1	111	0	20	0	210000.00	1.9	137	1	0	7	1
4	65.0	1	160	1	20	0	327000.00	2.7	116	0	0	8	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...
294	62.0	0	61	1	38	1	155000.00	1.1	143	1	1	270	0
295	55.0	0	1820	0	38	0	270000.00	1.2	139	0	0	271	0
296	45.0	0	2060	1	60	0	742000.00	0.8	138	0	0	278	0
297	45.0	0	2413	0	38	0	140000.00	1.4	140	1	1	280	0
298	50.0	0	196	0	45	0	395000.00	1.6	136	1	1	285	0

299 rows × 13 columns

[12]:

	age	anaemia	creatinine_phosphokinase	diabetes	ejection_fraction	high_blood_pressure	platelets	serum_creatinine	serum_sodium	sex	smoking	time	DEATH_EVEN
count	299.000000	299.000000	299.000000	299.000000	299.000000	299.000000	299.000000	299.00000	299.000000	299.000000	299.00000	299.000000	299.000(
mean	60.833893	0.431438	581.839465	0.418060	38.083612	0.351171	263358.029264	1.39388	136.625418	0.648829	0.32107	130.260870	0.321(
std	11.894809	0.496107	970.287881	0.494067	11.834841	0.478136	97804.236869	1.03451	4.412477	0.478136	0.46767	77.614208	0.467(
min	40.000000	0.000000	23.000000	0.000000	14.000000	0.000000	25100.000000	0.50000	113.000000	0.000000	0.00000	4.000000	0.000(
25%	51.000000	0.000000	116.500000	0.000000	30.000000	0.000000	212500.000000	0.90000	134.000000	0.000000	0.00000	73.000000	0.000(
50%	60.000000	0.000000	250.000000	0.000000	38.000000	0.000000	262000.000000	1.10000	137.000000	1.000000	0.00000	115.000000	0.000(
75%	70.000000	1.000000	582.000000	1.000000	45.000000	1.000000	303500.000000	1.40000	140.000000	1.000000	1.00000	203.000000	1.000(
max	95.000000	1.000000	7861.000000	1.000000	80.000000	1.000000	850000.000000	9.40000	148.000000	1.000000	1.00000	285.000000	1.000(

[16]:

	age	anaemia	creatinine_phosphokinase	diabetes	ejection_fraction	high_blood_pressure	platelets	serum_creatinine	serum_sodium	sex	smoking	time	DEATH_EVENT
mean	60.833893	0.431438	581.839465	0.418060	38.083612	0.351171	2.633580e+05	1.393880	136.625418	0.648829	0.321070	130.260870	0.321070
Std.Dev	11.894809	0.496107	970.287881	0.494067	11.834841	0.478136	9.780424e+04	1.034510	4.412477	0.478136	0.467670	77.614208	0.467670
Var	141.486483	0.246122	941458.571457	0.244102	140.063455	0.228614	9.565669e+09	1.070211	19.469956	0.228614	0.218716	6023.965276	0.218716

```
The number of people 45 or less in the database is 37.
The number of people older than 45 in the database is 262.
The youngest person in the database is 40 years old.
The oldest person in the database is 95 years old.


The number of people in the database who died following a heart failure event is 96 out of 299 patients.
The number of people in the database who survived following a heart failure event: 203 out of 299 patients.


In other words, the percentage of people who died following a heart failure event is 32.11%.


The percentage of young people (<= 45) who died after a heart failure event is 18.92%.
The percentage of old people (> 45) who died after a heart failure event is 33.97%.
The percentage of smokers who died after a heart failure event is 31.25%.


The number of men in the database is 194.
The number of men survivors in the database is 132 or 68.04%.
The number of women in the database is 105.
The number of women survivors in the database is 71 or 67.62%.
```

PART II: Matplot Lib