Data Analysis Report

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Data Table

trestbps	**chol**	**fbs**	**restecg**	**thalach**	**exang**	**oldpeak**	**slope**
Age	Sex	ChestPain	BloodPressure	Cholesterol	BloodSugar	MaxHeartRate	HeartDisease
63	1	3	145	233	1	150	1
37	1	2	130	250	0	187	1
41	0	1	130	204	0	172	1
56	1	1	120	236	0	178	1
57	0	0	120	354	0	163	1
57	1	0	140	192	0	148	1
56	0	1	140	294	0	153	1
44	1	1	120	263	0	173	1
52	1	2	172	199	1	162	1
57	1	2	150	168	0	174	1
54	1	0	140	239	0	160	1
48	0	2	130	275	0	139	1
49	1	1	130	266	0	171	1
64	1	3	110	211	0	144	1
58	0	3	150	283	1	162	1
50	0	2	120	219	0	158	1
58	0	2	120	340	0	172	1
66	0	3	150	226	0	114	1
43	1	0	150	247	0	171	1
69	0	3	140	239	0	151	1
59	1	0	135	234	0	161	1
44	1	2	130	233	0	179	1
42	1	0	140	226	0	178	1
61	1	2	150	243	1	137	1
40	1	3	140	199	0	178	1
71	0	1	160	302	0	162	1
59	1	2	150	212	1	157	1
51	1	2	110	175	0	123	1
65	0	2	140	417	1	157	1
53	1	2	130	197	1	152	1
41	0	1	105	198	0	168	1
65	1	0	120	177	0	140	1
44	1	1	130	219	0	188	1
54	1	2	125	273	0	152	1
51	1	3	125	213	0	125	1
46	0	2	142	177	0	160	1
54	0	2	135	304	1	170	1
54	1	2	150	232	0	165	1
65	0	2	155	269	0	148	1
65	0	2	160	360	0	151	1
51	0	2	140	308	0	142	1
48	1	1	130	245	0	180	1
45	1	0	104	208	0	148	1
53	0	0	130	264	0	143	1
39	1	2	140	321	0	182	1
52	1	1	120	325	0	172	1
44	1	2	140	235	0	180	1
47	1	2	138	257	0	156	1
53	0	2	128	216	0	115	1
53	0	0	138	234	0	160	1

51	0	2	130	256	0	149	1
66	1	0	120	302	0	151	1
62	1	2	130	231	0	146	1
44	0	2	108	141	0	175	1
63	0	2	135	252	0	172	1
52	1	1	134	201	0	158	1
48	1	0	122	222	0	186	1
45	1	0	115	260	0	185	1
34	1	3	118	182	0	174	1
57	0	0	128	303	0	159	1
71	0	2	110	265	1	130	1
54	1	1	108	309	0	156	1
52	1	3	118	186	0	190	1
41	1	1	135	203	0	132	1
58	1	2	140	211	1	165	1
35	0	0	138	183	0	182	1
51	1	2	100	222	0	143	1
45	0	1	130	234	0	175	1
44	1	1	120	220	0	170	1
62	0	0	124	209	0	163	1
54	1	2	120	258	0	147	1
51	1	2	94	227	0	154	1
29	1	1	130	204	0	202	1
51	1	0	140	261	0	186	1
43	0	2	122	213	0	165	1
55	0	1	135	250	0	161	1
51	1	2	125	245	1	166	1
59	1	1	140	221	0	164	1
52	1	1	128	205	1	184	1
58	1	2	105	240	0	154	1
41	1	2	112	250	0	179	1
45	1	1	128	308	0	170	1
60	0	2	102	318	0	160	1
52	1	3	152	298	1	178	1
42	0	0	102	265	0	122	1
67	0	2	115	564	0	160	1
68	1	2	118	277	0	151	1
46	1	1	101	197	1	156	1
54	0	2	110	214	0	158	1
58	0	0	100	248	0	122	1
48	1	2	124	255	1	175	1
57	1	0	132	207	0	168	1
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45	0	1	112	160	0	138	1
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62	0	0	140	394	0	157	1
52	1	0	108	233	1	147	1
43	1	2	130	315	0	162	1
53	1	2	130	246	1	173	1
42	1	3	148	244	0	178	1
59	1	3	178	270	0	145	1
63	0	1	140	195	0	179	1
42	1	2	120	240	1	194	1

50	1	2	129	196	0	163	1
68	0	2	120	211	0	115	1
69	1	3	160	234	1	131	1
45	0	0	138	236	0	152	1
50	0	1	120	244	0	162	1
50	0	0	110	254	0	159	1
64	0	0	180	325	0	154	1
57	1	2	150	126	1	173	1
64	0	2	140	313	0	133	1
43	1	0	110	211	0	161	1
55	1	1	130	262	0	155	1
37	0	2	120	215	0	170	1
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56	1	3	120	193	0	162	1
46	0	1	105	204	0	172	1
46	0	0	138	243	0	152	1
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34	0	1	118	210	0	192	1
47	1	0	112	204	0	143	1
67	0	2	152	277	0	172	1
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54	0	2	160	201	0	163	1
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70	1	1	156	245	0	143	1
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67	1	0	160	286	0	108	0
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62	0	0	140	268	0	160	0
63	1	0	130	254	0	147	0
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40	1	0	110	167	0	114	0
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44	1	0	112	290	0	153	0
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50	1	2	140	233	0	163	0
41	1	0	110	172	0	158	0
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59	1	0	170	326	0	140	0
46	1	2	150	231	0	147	0
67	1	0	125	254	1	163	0
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44	1	0	110	197	0	177	0
60	1	0	125	258	0	141	0
58	1	0	150	270	0	111	0
68	1	2	180	274	1	150	0
62	0	0	160	164	0	145	0
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49	1	2	120	188	0	139	0
59	1	0	140	177	0	162	0
57	1	2	128	229	0	150	0
61	1	0	120	260	0	140	0

39	1	0	118	219	0	140	0
61	0	0	145	307	0	146	0
56	1	0	125	249	1	144	0
43	0	0	132	341	1	136	0
62	0	2	130	263	0	97	0
63	1	0	130	330	1	132	0
65	1	0	135	254	0	127	0
48	1	0	130	256	1	150	0
63	0	0	150	407	0	154	0
55	1	0	140	217	0	111	0
65	1	3	138	282	1	174	0
56	0	0	200	288	1	133	0
54	1	0	110	239	0	126	0
70	1	0	145	174	0	125	0
62	1	1	120	281	0	103	0
35	1	0	120	198	0	130	0
59	1	3	170	288	0	159	0
64	1	2	125	309	0	131	0
47	1	2	108	243	0	152	0
57	1	0	165	289	1	124	0
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64	1	0	120	246	0	96	0
70	1	0	130	322	0	109	0
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58	1	0	125	300	0	171	0
60	1	0	140	293	0	170	0
77	1	0	125	304	0	162	0
35	1	0	126	282	0	156	0
70	1	2	160	269	0	112	0
59	0	0	174	249	0	143	0
64	1	0	145	212	0	132	0
57	1	0	152	274	0	88	0
56	1	0	132	184	0	105	0
48	1	0	124	274	0	166	0
56	0	0	134	409	0	150	0
66	1	1	160	246	0	120	0
54	1	1	192	283	0	195	0
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43	1	0	132	247	1	143	0
62	0	0	138	294	1	106	0
67	1	0	100	299	0	125	0
59	1	3	160	273	0	125	0
45	1	0	142	309	0	147	0
58	1	0	128	259	0	130	0
50	1	0	144	200	0	126	0
62	0	0	150	244	0	154	0
38	1	3	120	231	0	182	0
66	0	0	178	228	1	165	0
52	1	0	112	230	0	160	0
53	1	0	123	282	0	95	0
63	0	0	108	269	0	169	0
54	1	0	110	206	0	108	0
66	1	0	112	212	0	132	0

55	0	0	180	327	0	117	0
49	1	2	118	149	0	126	0
54	1	0	122	286	0	116	0
56	1	0	130	283	1	103	0
46	1	0	120	249	0	144	0
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58	1	0	146	218	0	105	0
57	1	1	124	261	0	141	0
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61	1	0	138	166	0	125	0
42	1	0	136	315	0	125	0
52	1	0	128	204	1	156	0
59	1	2	126	218	1	134	0
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46	1	0	140	311	0	120	0
59	1	3	134	204	0	162	0
57	1	1	154	232	0	164	0
57	1	0	110	335	0	143	0
55	0	0	128	205	0	130	0
61	1	0	148	203	0	161	0
58	1	0	114	318	0	140	0
58	0	0	170	225	1	146	0
67	1	2	152	212	0	150	0
44	1	0	120	169	0	144	0
63	1	0	140	187	0	144	0
63	0	0	124	197	0	136	0
59	1	0	164	176	1	90	0
57	0	0	140	241	0	123	0
45	1	3	110	264	0	132	0
68	1	0	144	193	1	141	0
57	1	0	130	131	0	115	0
57	0	1	130	236	0	174	0

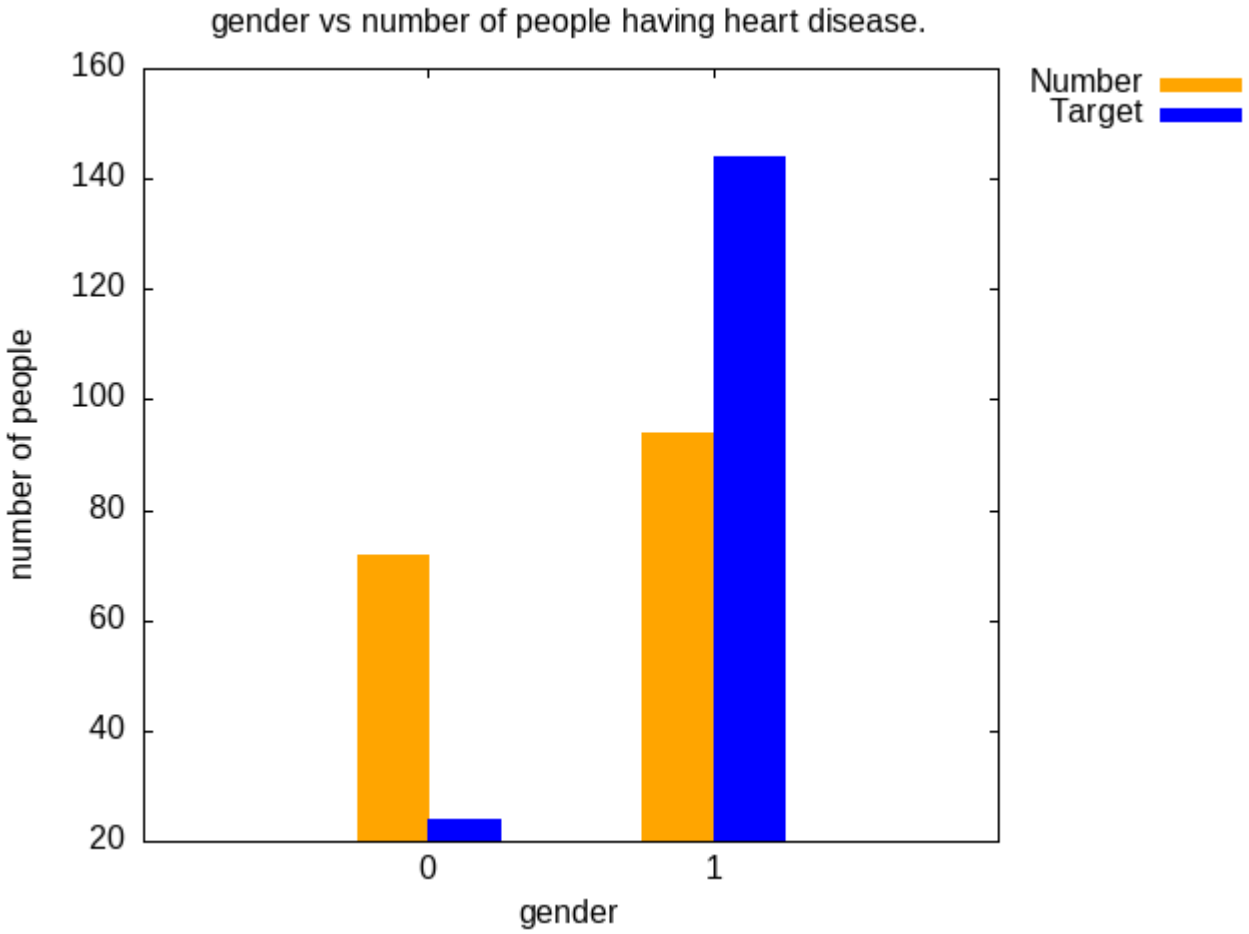

Figure 1: histogram of gender vs number of people having heart disease. For example

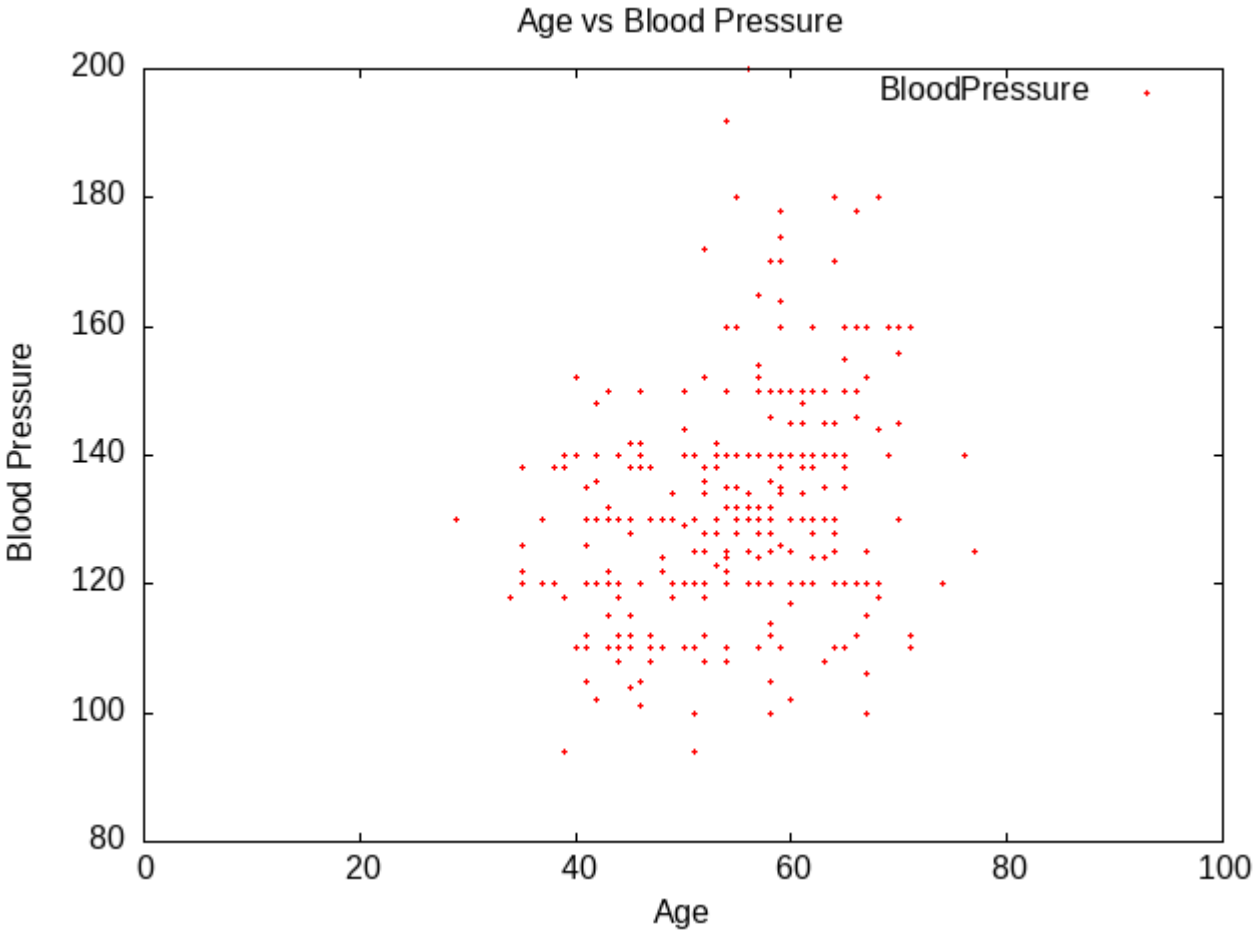

Figure 2: correlation between Age (x-axis) vs Blood pressure (y-axis). Using points data

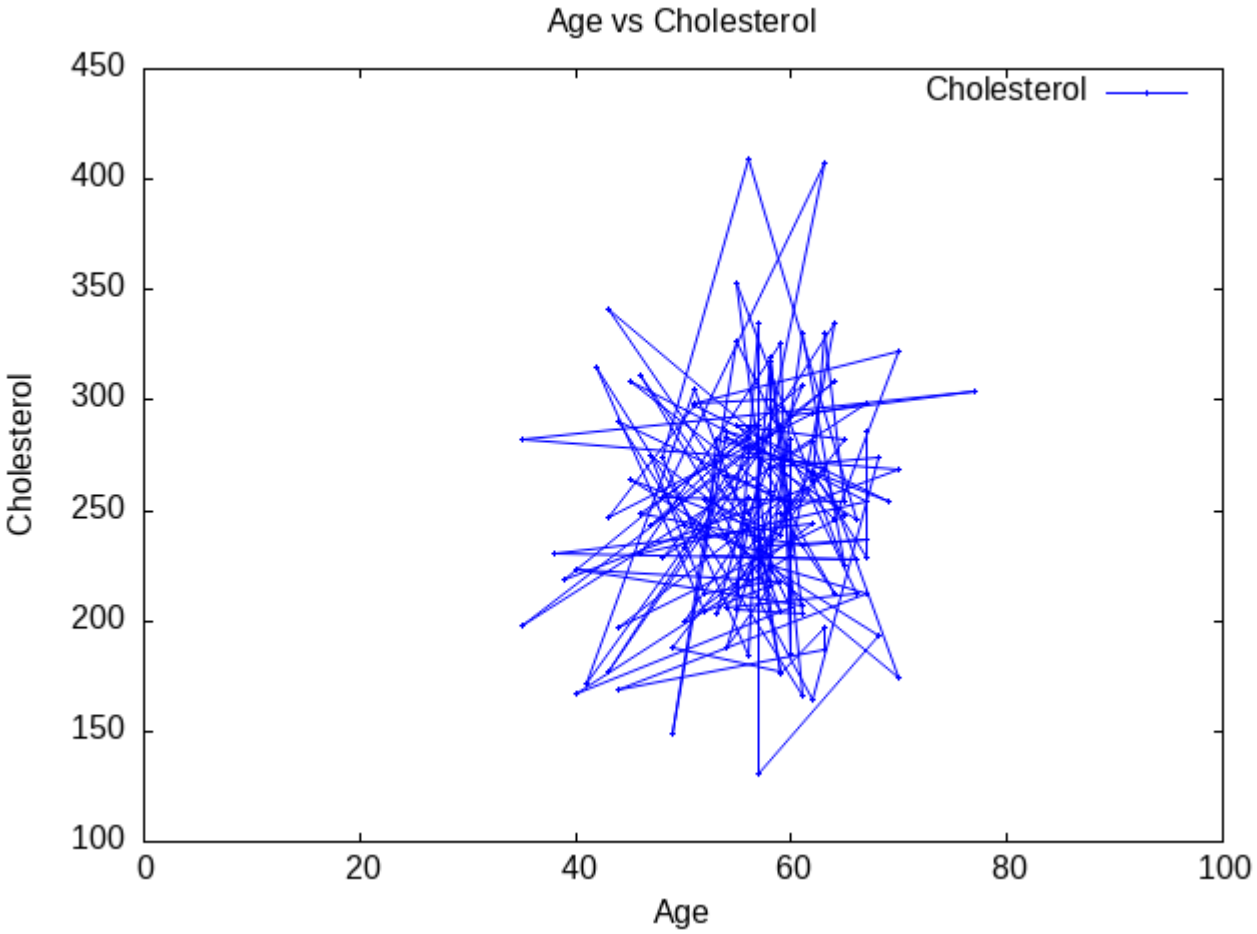

Figure 3: correlation between Age (x-axis) vs Cholesterol (y-axis). Using line points for those who do not have heart disease.

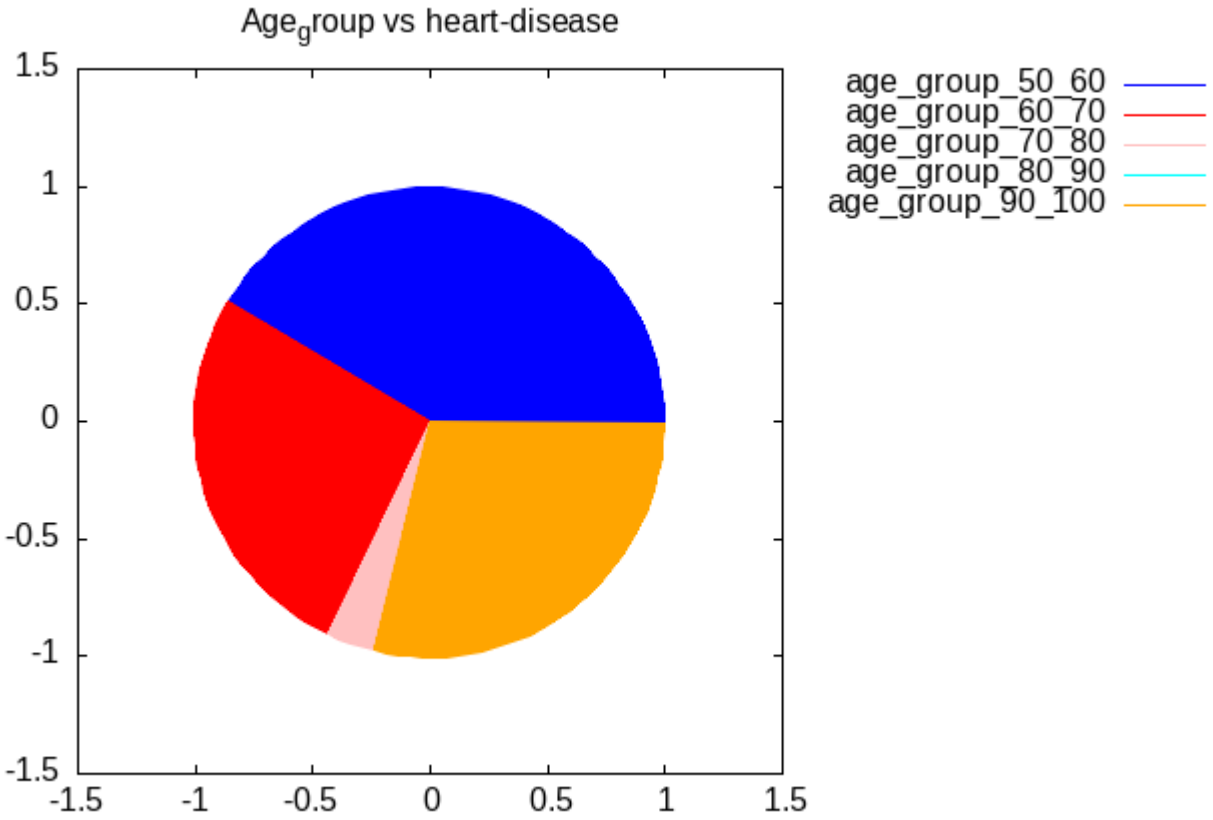

Figure 4: pie chart to show the percentage of age groups that have heart disease. Age groups should be 40-50, 50-60...90-100

1 Summary

1.1 Histogram of Gender vs. Number of People with Heart Disease

Figure 1 illustrates the distribution of individuals with heart disease categorized by gender. This histogram clearly shows the number of people with heart disease for both male and female groups. From the plot, we observe the gender-based prevalence of heart disease, which could help in understanding whether heart disease is more common in one gender compared to the other.

1.2 Correlation Between Age and Blood Pressure

Figure 2 shows the correlation between age (x-axis) and blood pressure (y-axis). The plot highlights how blood pressure tends to vary across different age groups. We can observe that as age increases, there is a general trend towards higher blood pressure, which is a known risk factor for cardiovascular diseases. This plot can be used to understand how age correlates with an important health indicator like blood pressure, further helping in the analysis of cardiovascular health.

1.3 Correlation Between Age and Cholesterol (For Those Without Heart Disease)

In Figure 3, the correlation between age (x-axis) and cholesterol levels (y-axis) is shown for individuals who do not have heart disease. This line plot helps to visualize how cholesterol levels fluctuate with age in the absence of heart

disease. Typically, cholesterol levels tend to increase with age, and this plot can be used to identify patterns in cholesterol levels across different age groups for individuals not affected by heart disease.

1.4 Pie Chart of Age Groups with Heart Disease

Figure 4 presents a pie chart depicting the percentage of people with heart disease across various age groups. The age groups are categorized into intervals such as 40-50, 50-60, 60-70, and so on, up to 90-100 years. From the chart, we can observe which age group has the highest prevalence of heart disease. This visualization helps in understanding the relationship between age and the likelihood of developing heart disease, providing insight into which age groups are most affected.