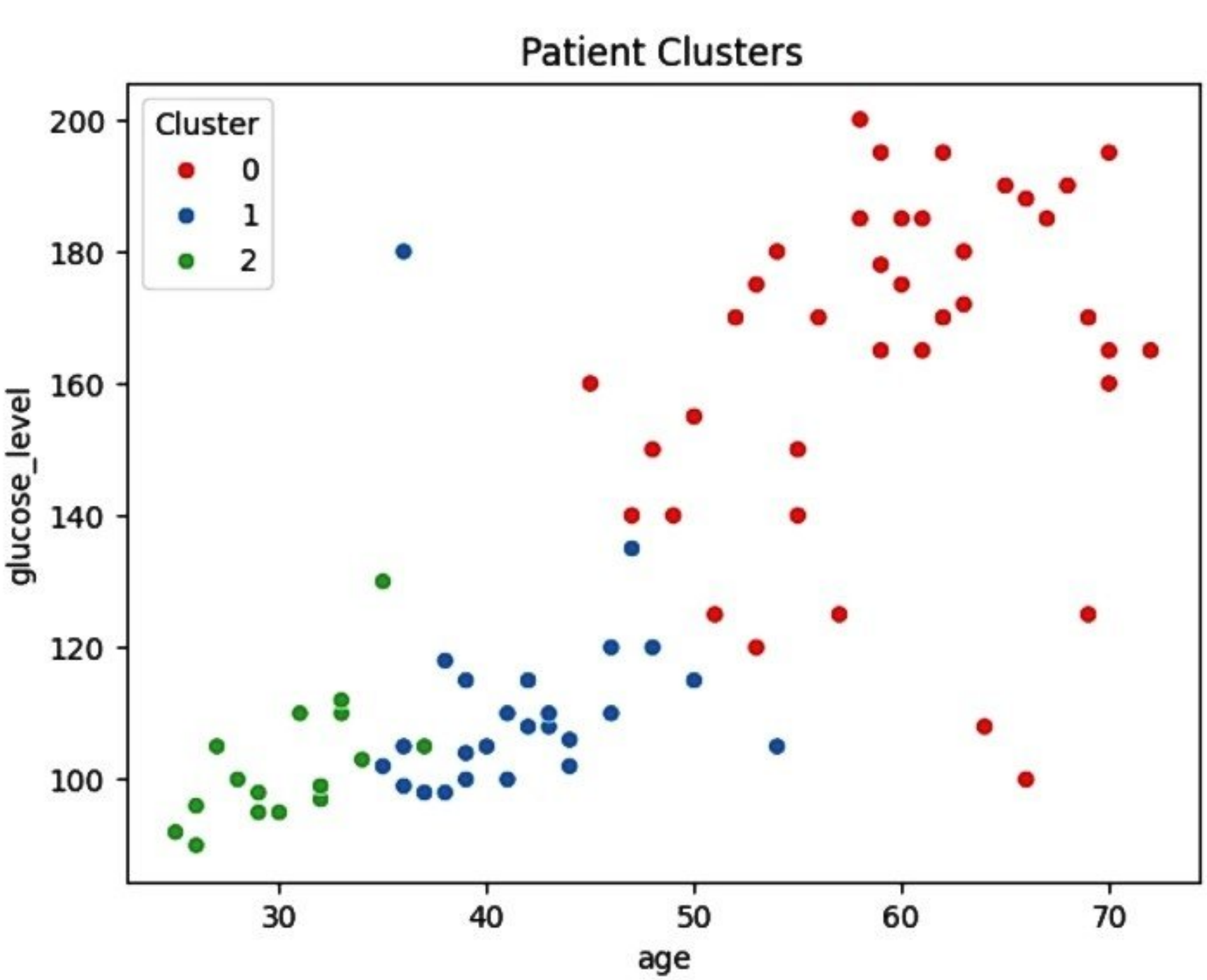
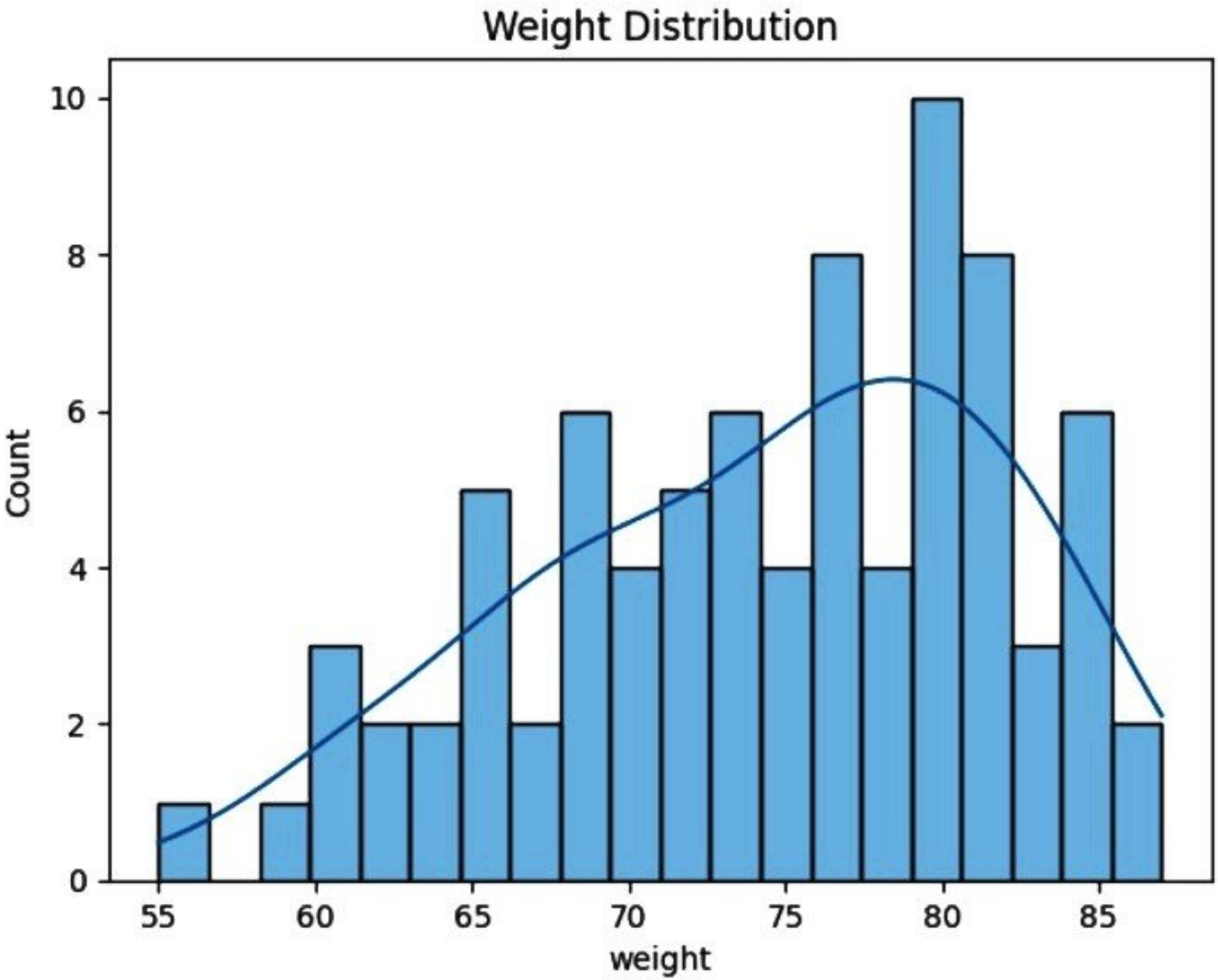
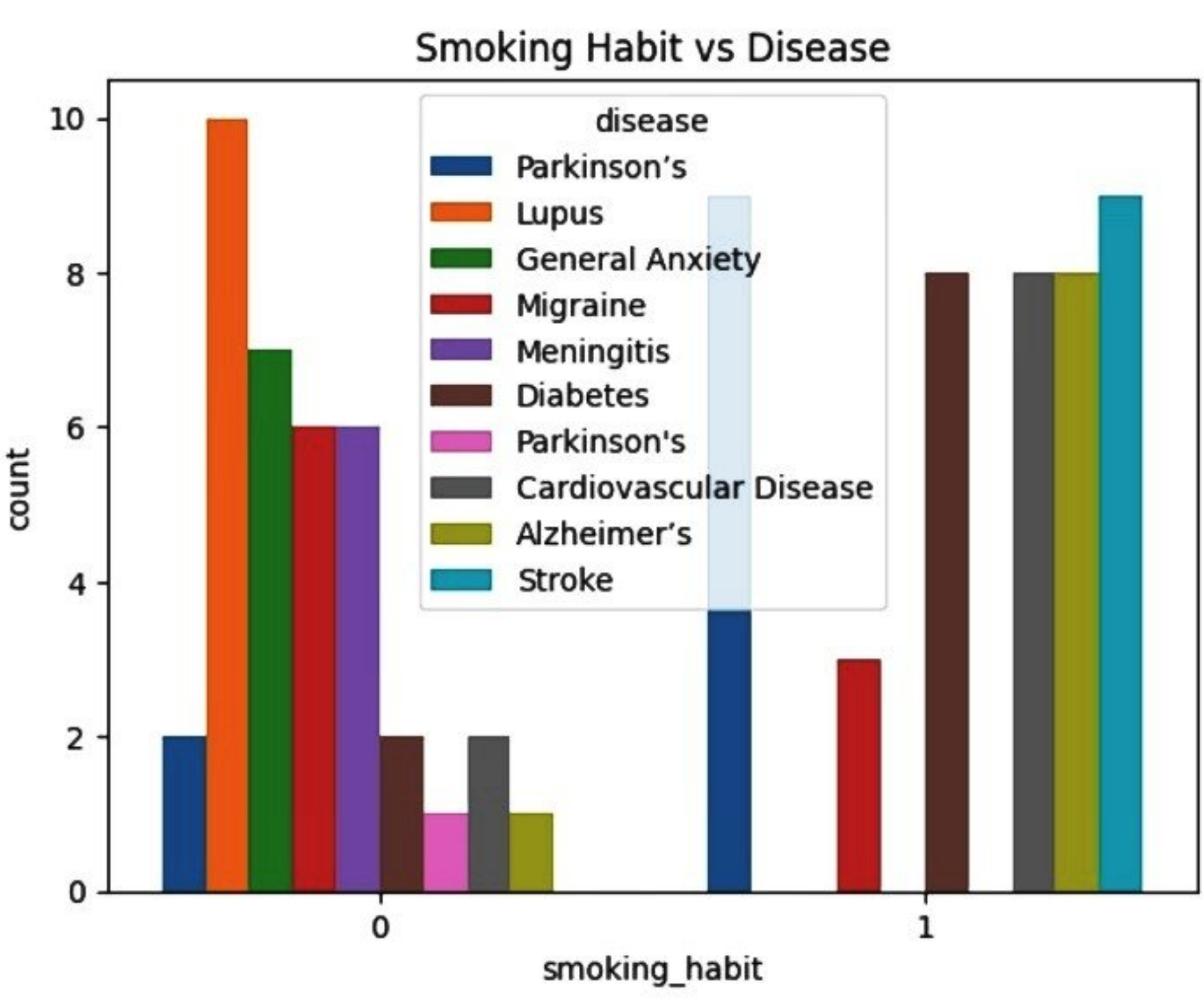
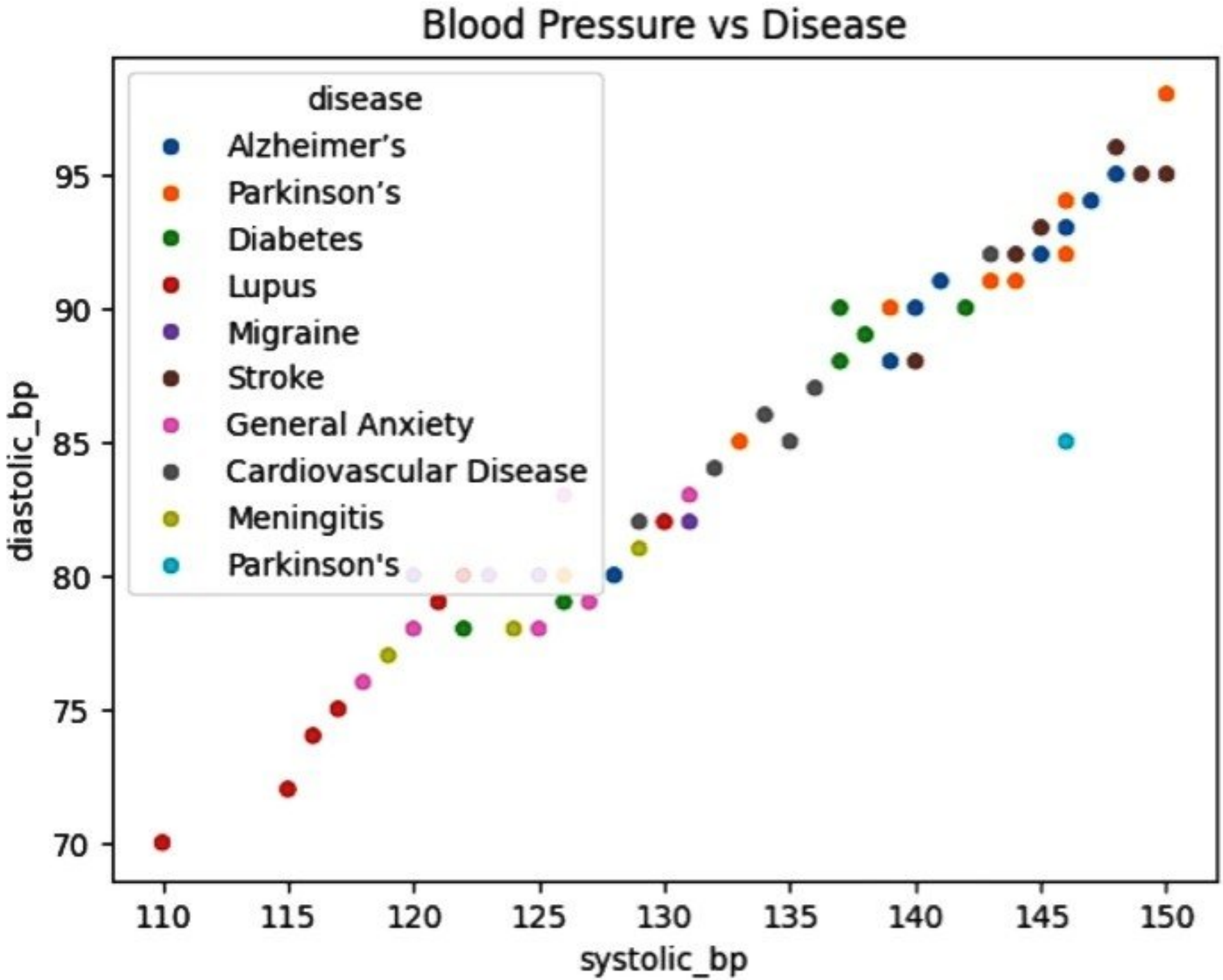
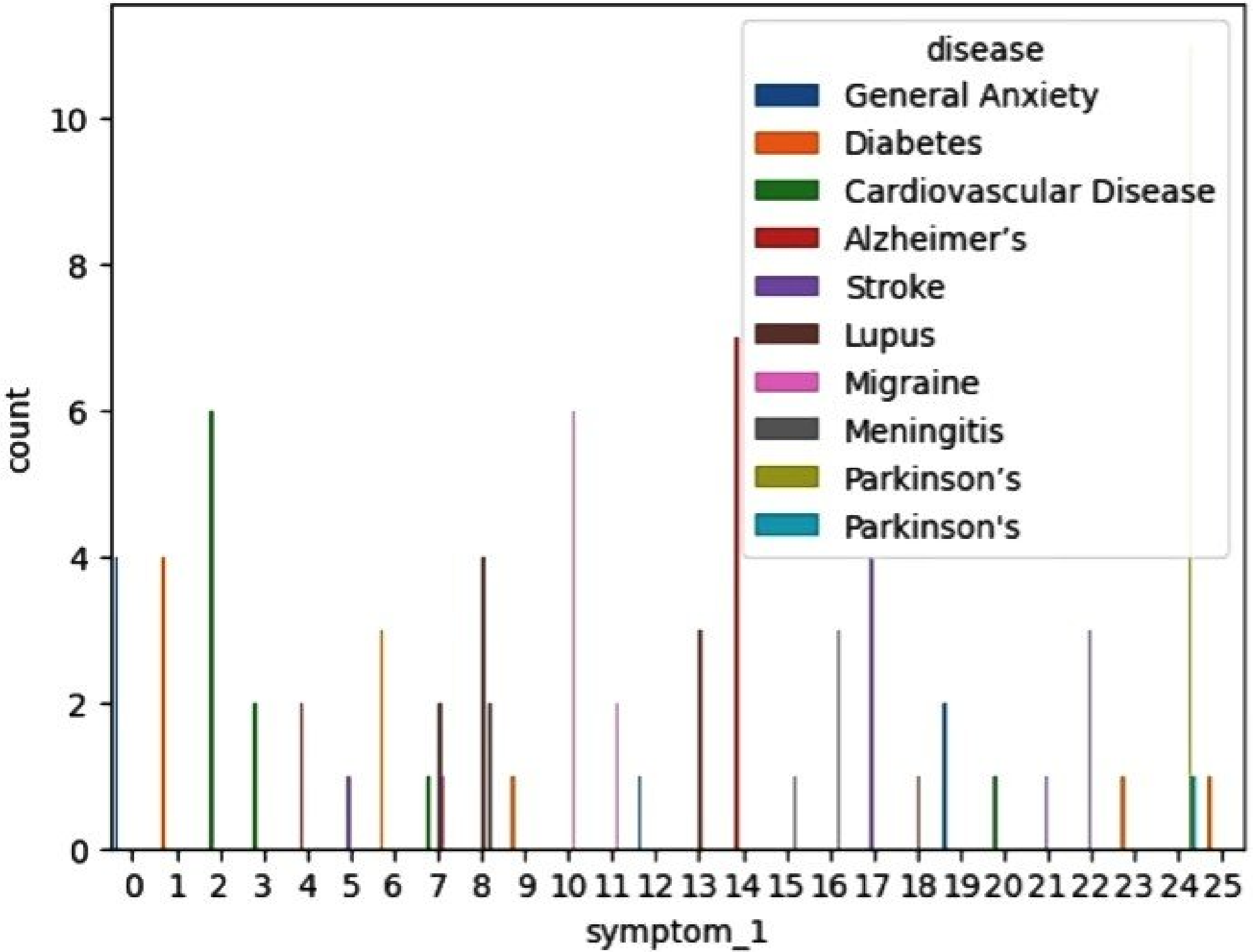
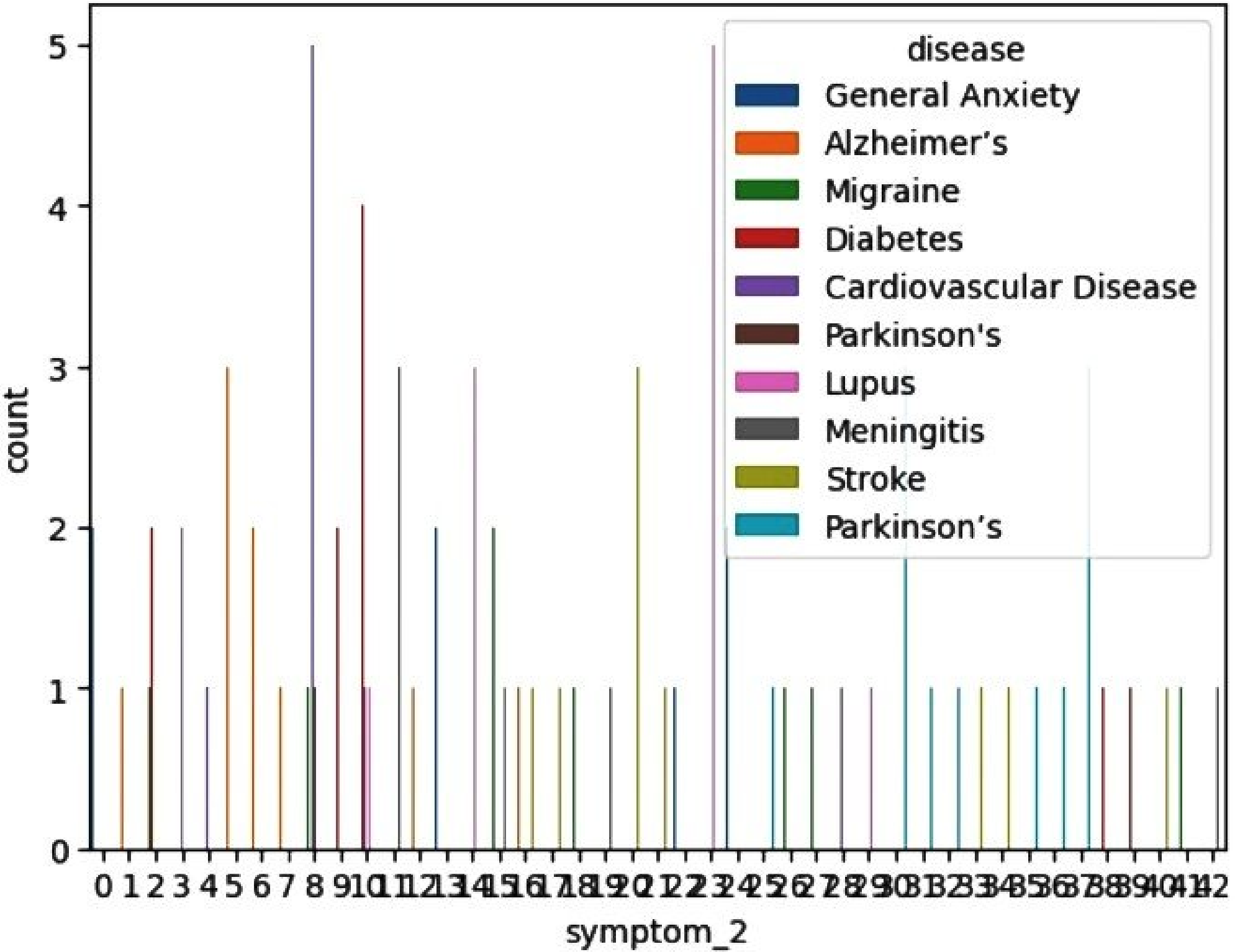

Patient Clusters
Cluster
0
1
2
glucose_level
200
180
160
140
120
100
30
40
50
60
70
age

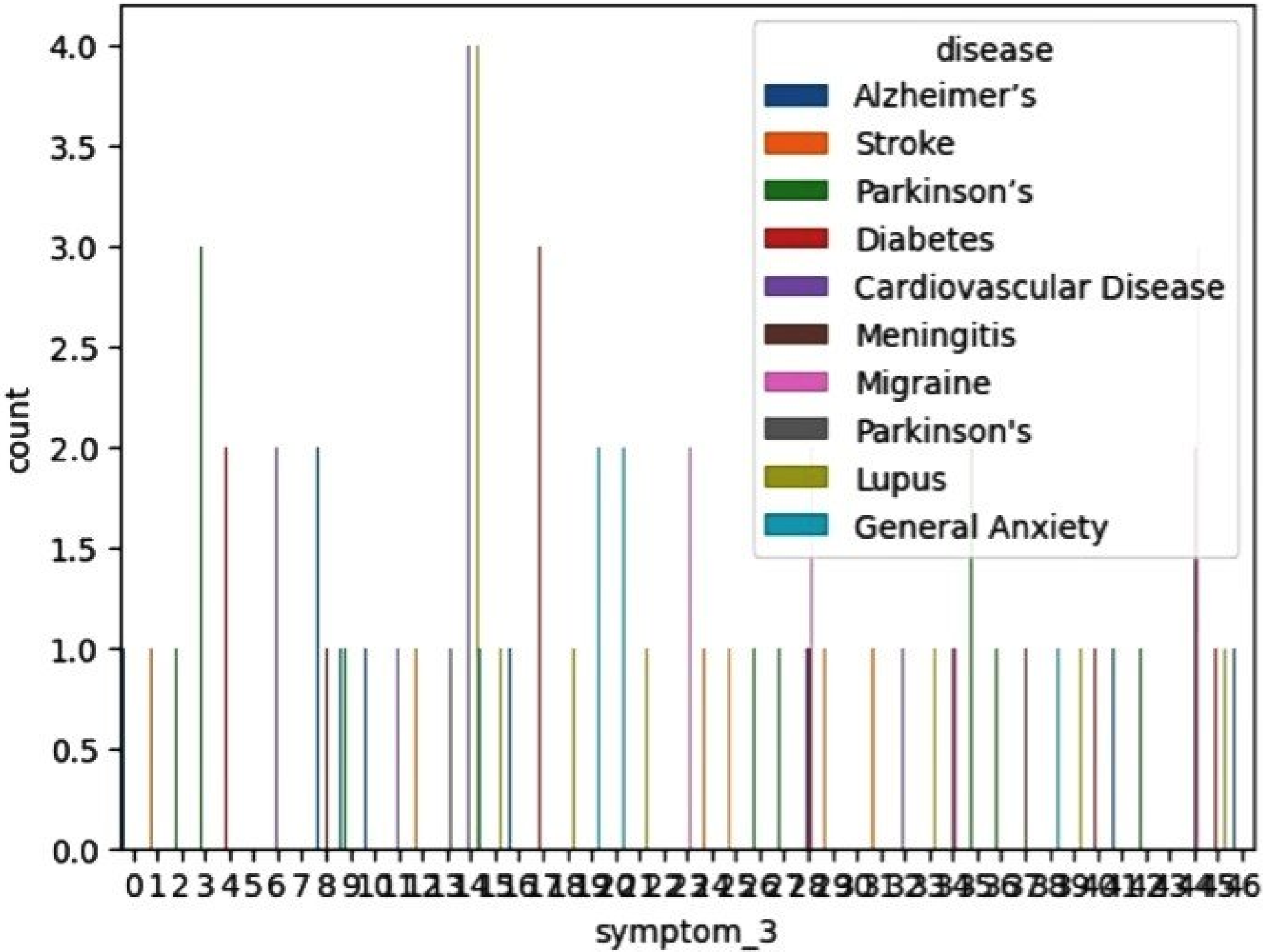

Weight Distribution
Count
weight
0
2
4
6
8
10
55
60
65
70
75
80
85

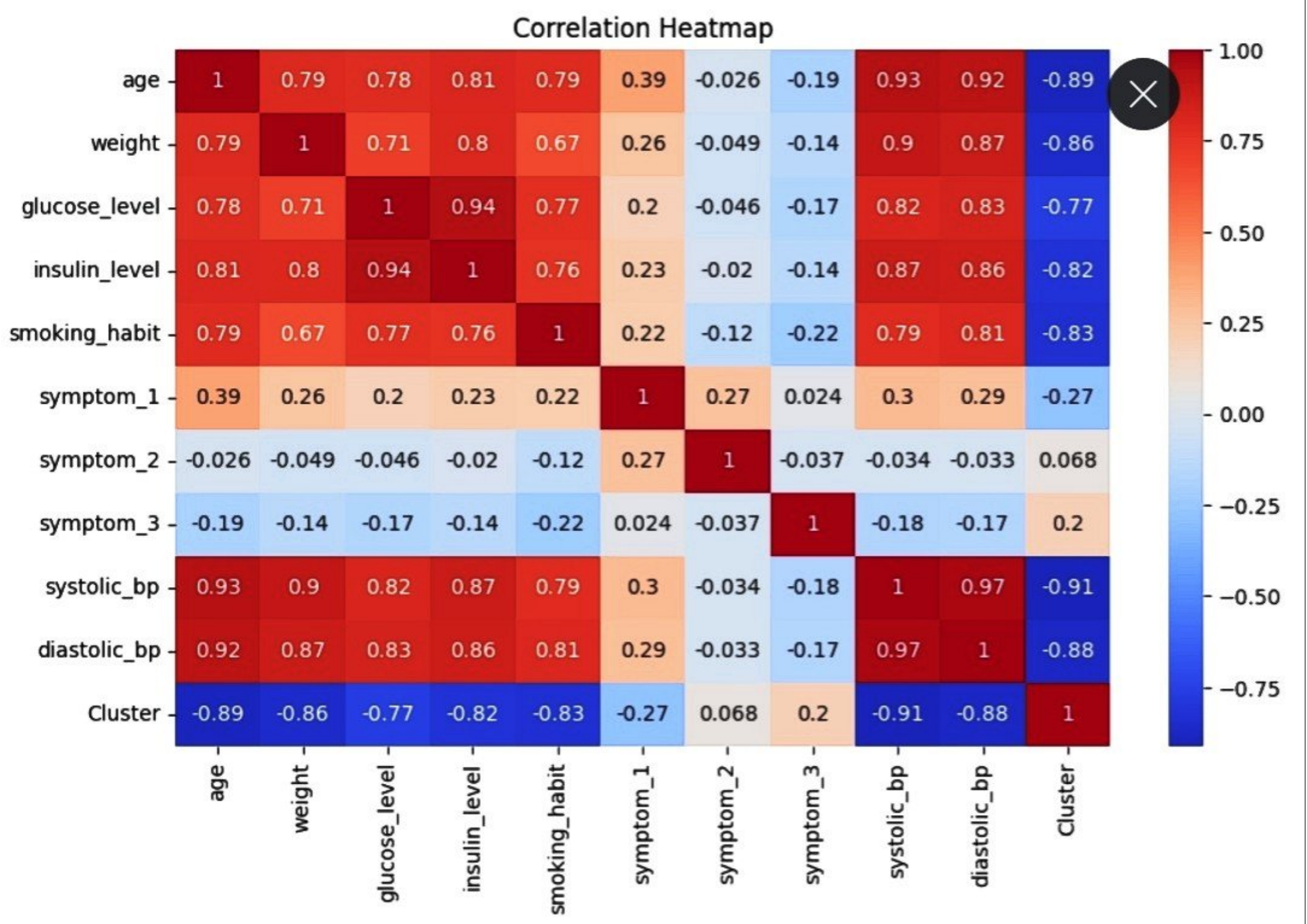

Smoking Habit vs Disease
disease
Parkinson's
Lupus
General Anxiety
Migraine
Meningitis
Diabetes
Parkinson's
Cardiovascular Disease
Alzheimer's
Stroke
count
0
2
4
6
8
10
0
1
smoking_habit

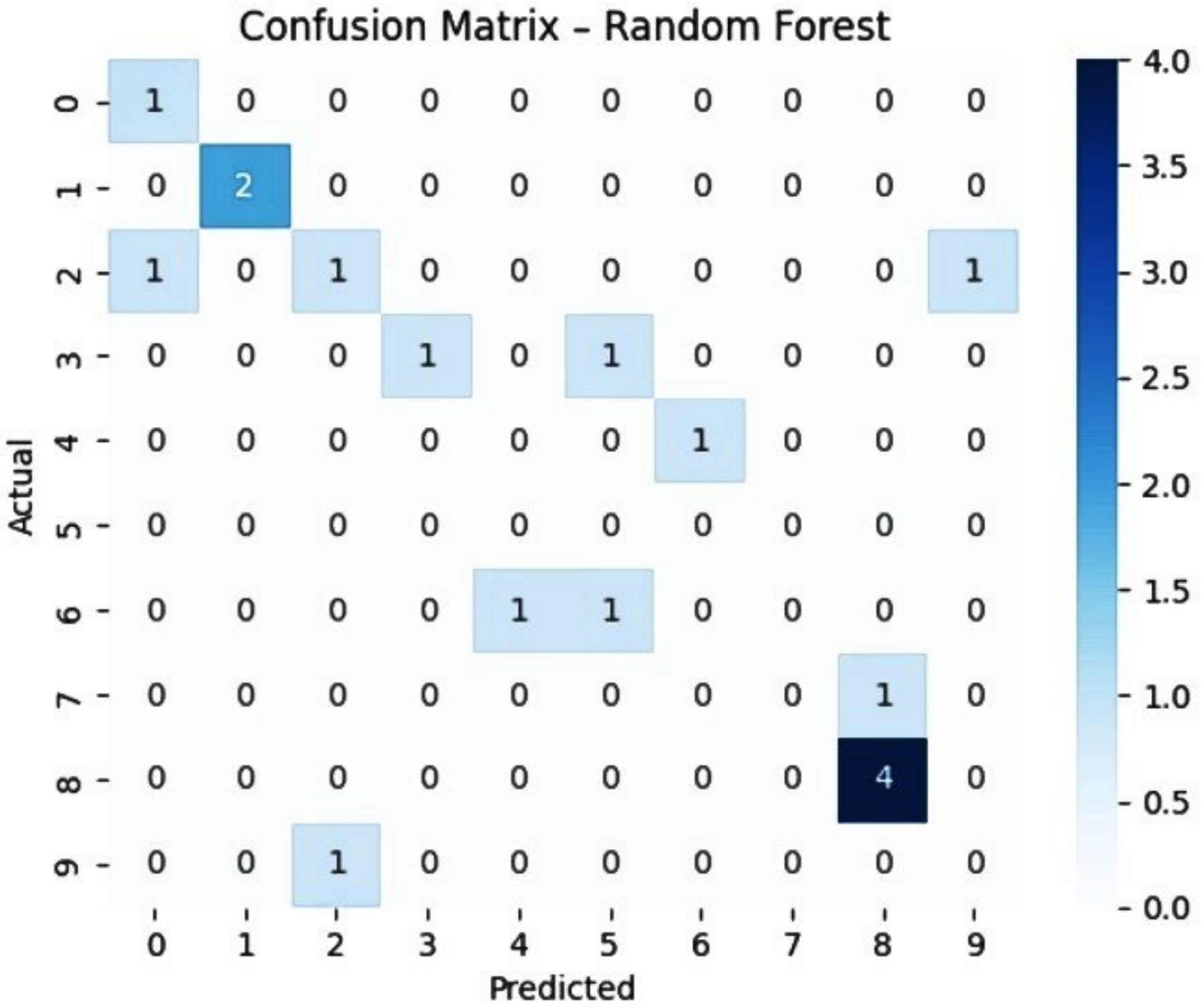

Blood Pressure vs Disease
disease
Alzheimer's
Parkinson's
Diabetes
Lupus
Migraine
Stroke
General Anxiety
Cardiovascular Disease
Meningitis
Parkinson's
diastolic_bp
95
90
85
80
75
70
110
115
120
125
130
135
140
145
150
systolic_bp

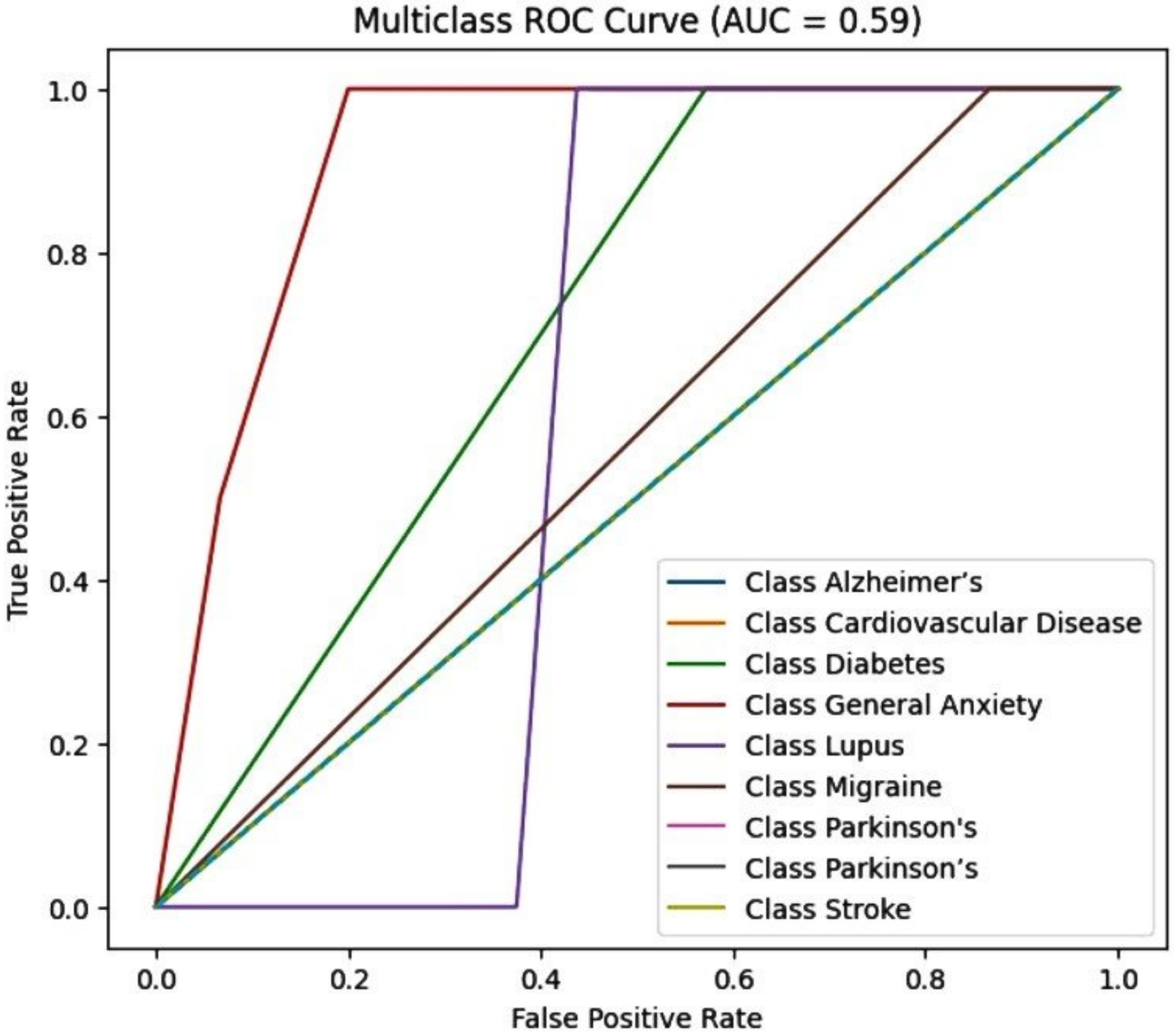

disease
General Anxiety
Diabetes
Cardiovascular Disease
Alzheimer's
Stroke
Lupus
Migraine
Meningitis
Parkinson's
Parkinson's
count
0
2
4
6
8
10
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
symptom_1


disease
General Anxiety
Alzheimer's
Migraine
Diabetes
Cardiovascular Disease
Parkinson's
Lupus
Meningitis
Stroke
Parkinson's
count
0
1
2
3
4
5
symptom_2


disease
Alzheimer's
Stroke
Parkinson's
Diabetes
Cardiovascular Disease
Meningitis
Migraine
Parkinson's
Lupus
General Anxiety
count
symptom_3
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0


Correlation Heatmap
age 1 0.79 0.78 0.81 0.79 0.39 -0.026 -0.19 0.93 0.92 -0.89
weight 0.79 1 0.71 0.8 0.67 0.26 -0.049 -0.14 0.9 0.87 -0.86
glucose_level 0.78 0.71 1 0.94 0.77 0.2 -0.046 -0.17 0.82 0.83 -0.77
insulin_level 0.81 0.8 0.94 1 0.76 0.23 -0.02 -0.14 0.87 0.86 -0.82
smoking_habit 0.79 0.67 0.77 0.76 1 0.22 -0.12 -0.22 0.79 0.81 -0.83
symptom_1 0.39 0.26 0.2 0.23 0.22 1 0.27 0.024 0.3 0.29 -0.27
symptom_2 -0.026 -0.049 -0.046 -0.02 -0.12 0.27 1 -0.037 -0.034 -0.033 0.068
symptom_3 -0.19 -0.14 -0.17 -0.14 -0.22 0.024 -0.037 1 -0.18 -0.17 0.2
systolic_bp 0.93 0.9 0.82 0.87 0.79 0.3 -0.034 -0.18 1 0.97 -0.91
diastolic_bp 0.92 0.87 0.83 0.86 0.81 0.29 -0.033 -0.17 0.97 1 -0.88
Cluster -0.89 -0.86 -0.77 -0.82 -0.83 -0.27 0.068 0.2 -0.91 -0.88 1
age
weight
glucose_level
insulin_level
smoking_habit
symptom_1
symptom_2
symptom_3
systolic_bp
diastolic_bp
Cluster
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75


Confusion Matrix – Random Forest
Actual
Predicted
0 1 2 3 4 5 6 7 8 9
1 0 0 0 0 0 0 0 0 0
0 2 0 0 0 0 0 0 0 0
1 0 1 0 0 0 0 0 0 1
0 0 0 1 0 1 0 0 0 0
0 0 0 0 0 0 1 0 0 0
0 0 0 0 0 0 0 0 0 0
0 0 0 0 1 1 0 0 0 0
0 0 0 0 0 0 0 0 1 0
0 0 0 0 0 0 0 0 4 0
0 0 1 0 0 0 0 0 0 0
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0


Multiclass ROC Curve (AUC = 0.59)
True Positive Rate
False Positive Rate
0.0
0.2
0.4
0.6
0.8
1.0
Class Alzheimer's
Class Cardiovascular Disease
Class Diabetes
Class General Anxiety
Class Lupus
Class Migraine
Class Parkinson's
Class Parkinson's
Class Stroke