The best parameters are {'learning\_rate': 0.01, 'max\_depth': 50, 'max\_features': 'log2', 'min\_impurity\_decrease': 0.3, 'min\_samples\_split': 2, 'n\_estimators': 50, 'subsample': 0.3}

Sensitivity: 0.98

Specificity: 0.58

Accuracy: 0.96

Rank #1: (0.0012223743399177867, 'Heart Trouble-Take Medication?')

Rank #2: (0.0010023469587326084, 'Chest Pain-Take Medication for It?')

Rank #3: (0.0010023469587325806, 'EKG-SUMMARY OF 3 READINGS 8')

Rank #4: (0.0009045570115391588, 'Shortness of Breath When Doing Physi ...')

Rank #5: (0.0009045570115391588, 'Heart Trouble-Think You Have It?')

Rank #6: (0.0008801095247408242, "EXAMINING PHYSICIAN'S IMPRESSION-ORG ...")

Rank #7: (0.0008312145511440716, 'Heart Sounds-A2')

Rank #8: (0.0007578720907490122, 'High Blood Pressure-Think You Have It?')

Rank #9: (0.0007334246039506498, 'Heart Pain-Where Does It Bother You?')

Rank #10: (0.0007089771171523152, 'Sequence Number')

Sequence Number: 0.0007089771171523152

Final Estimation Weight: 0.0003178173283786001

Headaches: 9.778994719336631e-05

Nose Bleeds: 2.444748679833464e-05

Tinnitus: 0.00022002738118515053

Dizziness: 0.0001222374339917287

Fainting: 0.00022002738118515053

Stroke: 0.0

Stroke Review Summary: 0.0

Paralyzed: 0.0

Sore Throats: 0.0002444748679835407

Shortness of Breath When Climbing Stairs: 0.00022002738118517828

Shortness of Breath When Doing Physi ...: 0.0009045570115391588

Shortness of Breath When Idle: 0.0003667123019753249

Shortness of Breath When Excited or ...: -4.8894973596752545e-05

Wake Up at Night Because of Shortnes ...: 0.0004889497359671091

Chest Pain-In Past Few Years: 0.0003667123019753249

Chest Pain-Where Does It Bother You?: 0.0003178173283786001

Chest Pain-Does It Move Around?: -4.8894973596752545e-05

Chest Pain-Duration?: 7.334246039500392e-05

Chest Pain-When Does It Usually Come?(exercise): 0.0001222374339917287

Chest Pain-When Does It Usually Come?(mood): 0.00019557989438678813

Chest Pain-Take Medication for It?: 0.0010023469587326084

Heart Pain-In Part Few Year?: 0.0004400547623703843

Heart Pain-Where Does It Bother You?: 0.0007334246039506498

Heart Pain-Does It Move Around:: 0.0003422648151769625

Heart Pain-Duration?: 0.0001222374339917287

Heart Pain-When Does It Usually Come?(exercise): 0.0007089771171523152

Heart Pain-When Does It Usually Come?(mood): 0.0005867396831605032

Hear Pain-Late Medication for It?: 0.0015890866418931393

Heart Beat-Acting Funny?: 0.0005622921963621685

Heart Beat-Beating Hard?: 0.00029336984158020996

Swollen Ankles at Bedtime?: 0.00017113240758842574

Leg Cramps?: 0.00019557989438678813

Varicose Veins?: 2.444748679833464e-05

Rheumatic Fever Diagnosis?: 0.0005133972227654438

Chorea or St. Vitus Dance Diagnosis?: 0.0001711324075884535

Hardening of the Arteries Diagnosis?: 4.889497359666928e-05

High Blood Pressure-Think You Have It?: 0.0007578720907490122

High Blood Pressure- How Long Ago Di ...: 0.0003422648151769625

High Blood Pressure-Had It Within Pa ...: 0.0002444748679835407

High Blood Pressure-Take Medication?: 0.00041560727557199417

Heart Trouble-Think You Have It?: 0.0009045570115391588

Heart Trouble-How Long Did It Start?: -9.778994719350509e-05

Heart Trouble-Had It Within Past 12 ...: -0.0006600821435557014

Heart Trouble-Take Medication?: 0.0012223743399177867

Time of Examination(01-21): 0.00022002738118515053

Average Systolic Blood Pressure: 0.00019557989438678813

Average Diastolic Blood Pressure: 0.00022002738118515053

Average Systolic Blood Pressure Recode: -4.8894973596752545e-05

Average Diastolic Blood Pressure Recode: 0.0003911597887736873

When Venipuncture Was Done in Relati ...: 0.00036671230197529714

Ocular Fundi-Right Eye: 0.00017113240758848125

Ocular Fundi-Left Eye: 9.778994719339407e-05

Ocular Fundi Condition-Right Eye: 0.0002689223547818753

Ocular Fundi Condition-Left Eye: 0.00029336984158026547

Venous Engorgement-Right Eye: 0.0

Venous Engorgement-Left Eye: 0.0

Disc. Abnormality-Right Eye: 0.0

Disc. Abnormality-Left Eye: 0.0

Lens Opacities-Right Eye: 0.0

Lens Opacities-Left Eye: -2.4447486798362394e-05

Ocular Fundi-Other-Right Eye: 9.778994719333856e-05

Ocular Fundi-Other -Left Eye: 0.00019557989438678813

Neck-Venous Engorgement: 0.0

Peripheral Arteries-All Normal: 0.00017113240758842574

Periphearal Arteries-Right Side-Supe ...: 0.0001711324075884535

Periphearal Arteries-Left Side-Brachial : 0.00014668492079011886

Peripheral Arteries-Right Side-Radial: -9.778994719344958e-05

Peripheral Arteries-Left Side Superf ...: 0.00022002738118517828

Peripheral Arteries-Left Side Brachial: 9.778994719336631e-05

Peripheral Arteries-Left Side-Radical: 4.889497359666928e-05

Quality of Aterial Pulsations-All Normal: 0.0002933698415802377

Quality of Arterial Pulsations-Right 1...: 0.00039115978877365953

Quality of Arterial Pulsations-Right 2...: 0.00022002738118515053

Quality of Arterial Pulsations-Right 3...: -0.00022002738118526155

Quality of Arterial Pulsations-Left 1...: -4.889497359672479e-05

Quality of Arterial Pulsations-Left 2...: 7.334246039500392e-05

Quality of Arterial Pulsations-Left 3...: 0.00014668492079011886

Lower Extremities-Right: 0.0

Lower Extremities-Left: 0.0003178173283786001

Lower Extremities-Right-Varicosities: 0.00012223743399175646

Lower Extremities-Right-Dependent Edema: -7.334246039508718e-05

Lower Extremities-Right Ulcers: -2.7755575615628914e-17

Lower Extremities-Left-Varicosities: 9.778994719336631e-05

Lower Extremities-Left-Dependent Edema: 0.0001466849207900911

Lower Extremities-Left-Ulcers: 9.778994719339407e-05

Thrills: 4.889497359666928e-05

Apical Impulse: 0.0005133972227654715

Apical Impulse-Interspace (As Given): 0.0002689223547818753

Heart Sounds-Normal Chocked: 0.0004889497359670814

Heart Sounds-A2: 0.0008312145511440716

Heart Sounds-P2: 0.0002444748679835129

Heart Sounds-M1: 4.889497359664152e-05

Heart Sounds-Third Heart Sound: -4.88949735967803e-05

Heart Sounds-Spilling of Second Soun ...: 0.0004889497359670814

Heart Sounds-Other: 0.000684529630353925

Significant Murmurs-Type of Systolic ...: 2.444748679833464e-05

SIGNIFICANT MURMURS- PHYSICIAN'S IMP ...: 0.0

EXAMINING PHYSICIAN'S IMPRESSION-HYP ...: 0.0002689223547818753

EXAMINING PHYSICIAN'S IMPRESSION-PER ...: 0.0002933698415802377

EXAMINING PHYSICIAN'S IMPRESSION-ORG ...: 0.0008801095247408242

EXAMINING PHYSICIAN'S IMPRESSION-ANG ...: 0.0005133972227654438

EKG-SUMMARY OF 3 READINGS 1: 0.00026892235478190307

EKG-SUMMARY OF 3 READINGS 2: 0.00019557989438678813

EKG-SUMMARY OF 3 READINGS 3: 0.0005867396831605032

EKG-SUMMARY OF 3 READINGS 4: 0.0007089771171522874

EKG-SUMMARY OF 3 READINGS 5: 0.000635634656757228

EKG-SUMMARY OF 3 READINGS 6: 0.0004400547623703843

EKG-SUMMARY OF 3 READINGS 7: 7.334246039503167e-05

EKG-SUMMARY OF 3 READINGS 8: 0.0010023469587325806

EKG-SUMMARY OF 3 READINGS 9: 0.0006111871699588378

EKG-SUMMARY OF 3 READINGS 10: 0.00041560727557202193

EKG-SUMMARY OF 3 READINGS 11: 0.0003422648151769625

EKG-READING 1 1: 0.0003667123019753249

EKG-READING 1 2: -2.4447486798362394e-05

EKG-READING 1 3: 9.778994719333856e-05

EKG-READING 1 4: 0.0

EKG-READING 1 5: 4.889497359666928e-05

EKG-READING 1 6: 0.0

EKG-READING 1 7: -2.4447486798362394e-05

EKG-READING 1 8: 0.0

EKG-READING 1 9: 0.00019557989438678813

EKG-READING 1 10: 4.889497359666928e-05

EKG-READING 1 11: 0.00012223743399170095

EKG-READING 2 2: 0.0

EKG-READING 2 3: 9.778994719336631e-05

EKG-READING 2 4: 9.778994719333856e-05

EKG-READING 2 5: 4.889497359666928e-05

EKG-READING 2 6: 9.778994719333856e-05

EKG-READING 2 7: 4.889497359664152e-05

EKG-READING 2 8: 0.0

EKG-READING 2 9: 9.778994719333856e-05

EKG-READING 2 10: 9.778994719333856e-05

EKG-READING 2 11: -9.778994719344958e-05

EKG-READING 2 12: 2.444748679833464e-05

EKG-READING 3 1: 0.0002689223547818753

EKG-READING 3 2: 9.778994719333856e-05

EKG-READING 3 3: 0.00012223743399170095

EKG-READING 3 4: 2.444748679833464e-05

EKG-READING 3 5: 0.00022002738118515053

EKG-READING 3 6: 9.778994719333856e-05

EKG-READING 3 7: 0.0

EKG-READING 3 8: 0.0

EKG-READING 3 9: 2.444748679833464e-05

EKG-READING 3 10: 2.444748679833464e-05

EKG-READING 3 11: 4.889497359666928e-05

EKG-READING-AVERAGE RATE: 0.00046450224916871896

EKG READING-AVERAGE PR INTERVAL: 0.0002933698415802377

EKG READING-AVERAGE INTERVAL: 0.0002933698415802377

S-SAVE DEPTH IN V1 (SV1): 0.00039115978877365953

R-SAVE DEPTH IN V5 (SVS): 0.0002933698415802377

CHEST X-RAY-EXISTENCE OF LESION-READ 1...: 0.00019557989438678813

CHEST X-RAY-HEART ENLARGEMENT-READING 1: 0.00039115978877365953

CHEST X-RAY-OTHER CV ABNORMALITY-REA 1...: 0.00017113240758842574

CHEST X-RAY-EXISTENCE OF LESION-READ 2...: 0.0001955798943868159

CHEST X-RAY-HEART ENLARGEMENT-READING 2: 0.00019557989438678813

CHEST X-RAY-OTHER CV ABNORMALITY-REA 2...: -7.334246039508718e-05

CHEST X-RAY-EXISTENCE OF LESION-READ 3...: 2.444748679833464e-05

CHEST X-RAY-HEART ENLARGEMENT-READING 3: 9.778994719336631e-05

CHEST X-RAY-OTHER CV ABNORMALITY-REA 3...: 0.0001466849207900911

CHEST X-RAY-FINAL EVALUATION OF HEAR ...: 0.00029336984158020996

SERUM CHOLESTEROL VALUES (MG%): 0.00022002738118517828

Elapsed time: 111.18636798858643 seconds