

Project Development Phase Model Performance Test

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|---------------|---|
| Date | 9-11-2023 |
| Team ID | Team-593182 |
| Project Name | Project - Disease Prediction Using Machine Learning |
| Maximum Marks | 10 Marks |

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

| S.No. | Paramet er | Values | Screenshot | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---------------|---|---|---------|-----------|--------|----------|---------|----------------------|------|------|------|---|--------------------|------|------|------|---|------|------|------|------|---|------|------|------|------|---|---------------------|------|------|------|---|---------|------|------|------|---|-----------|------|------|------|---|------------------|------|------|------|---|----------------------|------|------|------|---|-------------|------|------|------|---|---------------------|------|------|------|---|-------------|------|------|------|---|--------|------|------|------|---|----------|------|------|------|---|------------------------------|------|------|------|---|---------------|------|------|------|---|------------------|------|------|------|---|------|------|------|------|---|-----------------|------|------|------|---|--------------|------|------|------|---|-------------|------|------|------|---|-------------|------|------|------|---|-------------|------|------|------|---|-------------|------|------|------|---|--------------|------|------|------|---|-----------------|------|------|------|---|--------------|------|------|------|---|----------------|------|------|------|---|----------|------|------|------|---|----------|------|------|------|---|---------|------|------|------|---|----------|------|------|------|---|----------------|------|------|------|---|------------------------------|------|------|------|---|----------------------|------|------|------|---|-----------|------|------|------|---|-----------|------|------|------|---|--------------|------|------|------|---|---------|------|------|------|---|-------------------------|------|------|------|---|----------------|------|------|------|---|-------------|------|------|------|---|----------|--|--|------|----|-----------|------|------|------|----|--------------|------|------|------|----|
| 1. | Metrics | <p>Regression Model: MAE - , MSE - , RMSE - , R2 score -</p> <p>Classification Model: Confusion Matrix - , Accuray Score- & Classification Report -</p> | <p>Classification Report:</p> <pre>print(classification_report(test_y,preds))</pre> <table><thead><tr><th></th><th>precision</th><th>recall</th><th>f1-score</th><th>support</th></tr></thead><tbody><tr><td>(vertigo) Parosymsal</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Positional Vertigo</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>AIDS</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Acne</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Alcoholic hepatitis</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Allergy</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Arthritis</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Bronchial Asthma</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Cervical spondylosis</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Chicken pox</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Chronic cholestasis</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Common Cold</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Dengue</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Diabetes</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Dimorphic hemorrhoids(piles)</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Drug Reaction</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Fungal infection</td><td>1.00</td><td>0.50</td><td>0.67</td><td>2</td></tr><tr><td>GERD</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Gastroenteritis</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Heart attack</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Hepatitis B</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Hepatitis C</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Hepatitis D</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Hepatitis E</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Hypertension</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Hyperthyroidism</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Hypoglycemia</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Hypothyroidism</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Impetigo</td><td>0.50</td><td>1.00</td><td>0.67</td><td>1</td></tr><tr><td>Jaundice</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Malaria</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Migraine</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Osteoarthritis</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Paralysis (brain hemorrhage)</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Peptic ulcer disease</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Pneumonia</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Psoriasis</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Tuberculosis</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Typhoid</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Urinary tract infection</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>Varicose veins</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>hepatitis A</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1</td></tr><tr><td>accuracy</td><td></td><td></td><td>0.98</td><td>42</td></tr><tr><td>macro avg</td><td>0.99</td><td>0.99</td><td>0.98</td><td>42</td></tr><tr><td>weighted avg</td><td>0.99</td><td>0.98</td><td>0.98</td><td>42</td></tr></tbody></table> | | precision | recall | f1-score | support | (vertigo) Parosymsal | 1.00 | 1.00 | 1.00 | 1 | Positional Vertigo | 1.00 | 1.00 | 1.00 | 1 | AIDS | 1.00 | 1.00 | 1.00 | 1 | Acne | 1.00 | 1.00 | 1.00 | 1 | Alcoholic hepatitis | 1.00 | 1.00 | 1.00 | 1 | Allergy | 1.00 | 1.00 | 1.00 | 1 | Arthritis | 1.00 | 1.00 | 1.00 | 1 | Bronchial Asthma | 1.00 | 1.00 | 1.00 | 1 | Cervical spondylosis | 1.00 | 1.00 | 1.00 | 1 | Chicken pox | 1.00 | 1.00 | 1.00 | 1 | Chronic cholestasis | 1.00 | 1.00 | 1.00 | 1 | Common Cold | 1.00 | 1.00 | 1.00 | 1 | Dengue | 1.00 | 1.00 | 1.00 | 1 | Diabetes | 1.00 | 1.00 | 1.00 | 1 | Dimorphic hemorrhoids(piles) | 1.00 | 1.00 | 1.00 | 1 | Drug Reaction | 1.00 | 1.00 | 1.00 | 1 | Fungal infection | 1.00 | 0.50 | 0.67 | 2 | GERD | 1.00 | 1.00 | 1.00 | 1 | Gastroenteritis | 1.00 | 1.00 | 1.00 | 1 | Heart attack | 1.00 | 1.00 | 1.00 | 1 | Hepatitis B | 1.00 | 1.00 | 1.00 | 1 | Hepatitis C | 1.00 | 1.00 | 1.00 | 1 | Hepatitis D | 1.00 | 1.00 | 1.00 | 1 | Hepatitis E | 1.00 | 1.00 | 1.00 | 1 | Hypertension | 1.00 | 1.00 | 1.00 | 1 | Hyperthyroidism | 1.00 | 1.00 | 1.00 | 1 | Hypoglycemia | 1.00 | 1.00 | 1.00 | 1 | Hypothyroidism | 1.00 | 1.00 | 1.00 | 1 | Impetigo | 0.50 | 1.00 | 0.67 | 1 | Jaundice | 1.00 | 1.00 | 1.00 | 1 | Malaria | 1.00 | 1.00 | 1.00 | 1 | Migraine | 1.00 | 1.00 | 1.00 | 1 | Osteoarthritis | 1.00 | 1.00 | 1.00 | 1 | Paralysis (brain hemorrhage) | 1.00 | 1.00 | 1.00 | 1 | Peptic ulcer disease | 1.00 | 1.00 | 1.00 | 1 | Pneumonia | 1.00 | 1.00 | 1.00 | 1 | Psoriasis | 1.00 | 1.00 | 1.00 | 1 | Tuberculosis | 1.00 | 1.00 | 1.00 | 1 | Typhoid | 1.00 | 1.00 | 1.00 | 1 | Urinary tract infection | 1.00 | 1.00 | 1.00 | 1 | Varicose veins | 1.00 | 1.00 | 1.00 | 1 | hepatitis A | 1.00 | 1.00 | 1.00 | 1 | accuracy | | | 0.98 | 42 | macro avg | 0.99 | 0.99 | 0.98 | 42 | weighted avg | 0.99 | 0.98 | 0.98 | 42 |
| | precision | recall | f1-score | support | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (vertigo) Parosymsal | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Positional Vertigo | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AIDS | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acne | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alcoholic hepatitis | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Allergy | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arthritis | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bronchial Asthma | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cervical spondylosis | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chicken pox | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chronic cholestasis | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Cold | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dengue | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diabetes | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dimorphic hemorrhoids(piles) | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drug Reaction | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fungal infection | 1.00 | 0.50 | 0.67 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GERD | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gastroenteritis | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart attack | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatitis B | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatitis C | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatitis D | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatitis E | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertension | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperthyroidism | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypoglycemia | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypothyroidism | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Impetigo | 0.50 | 1.00 | 0.67 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jaundice | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malaria | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Migraine | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Osteoarthritis | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paralysis (brain hemorrhage) | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peptic ulcer disease | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pneumonia | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Psoriasis | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tuberculosis | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Typhoid | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary tract infection | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Varicose veins | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hepatitis A | 1.00 | 1.00 | 1.00 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| accuracy | | | 0.98 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| macro avg | 0.99 | 0.99 | 0.98 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| weighted avg | 0.99 | 0.98 | 0.98 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

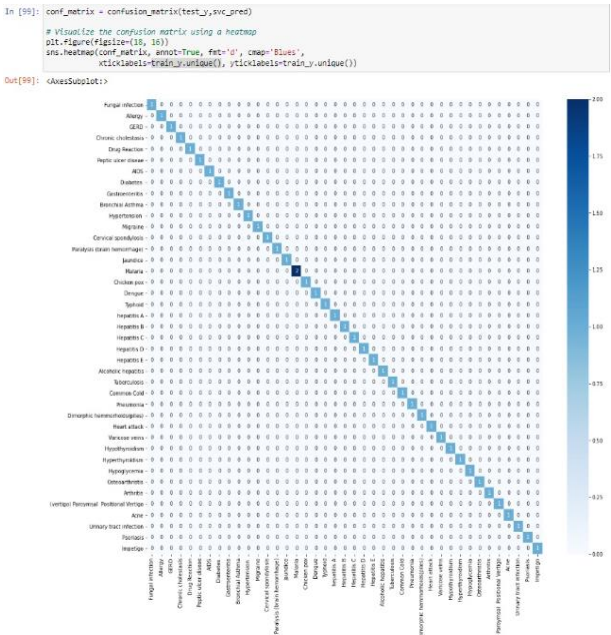
SVC

```
svc_pred = svc.predict(test_x)

print(classification_report(test_y,svc_pred))
```

| | precision | recall | f1-score | support |
|------------------------------|-----------|--------|----------|---------|
| (vertigo) Parosymal | 1.00 | 1.00 | 1.00 | 1 |
| Positional Vertigo | 1.00 | 1.00 | 1.00 | 1 |
| AIDS | 1.00 | 1.00 | 1.00 | 1 |
| Acne | 1.00 | 1.00 | 1.00 | 1 |
| Alcoholic hepatitis | 1.00 | 1.00 | 1.00 | 1 |
| Allergy | 1.00 | 1.00 | 1.00 | 1 |
| Arthritis | 1.00 | 1.00 | 1.00 | 1 |
| Bronchial Asthma | 1.00 | 1.00 | 1.00 | 1 |
| Cervical spondylosis | 1.00 | 1.00 | 1.00 | 1 |
| Chicken pox | 1.00 | 1.00 | 1.00 | 1 |
| Chronic cholestasis | 1.00 | 1.00 | 1.00 | 1 |
| Common Cold | 1.00 | 1.00 | 1.00 | 1 |
| Dengue | 1.00 | 1.00 | 1.00 | 1 |
| Diabetes | 1.00 | 1.00 | 1.00 | 1 |
| Dimorphic hemorrhoids(piles) | 1.00 | 1.00 | 1.00 | 1 |
| Drug Reaction | 1.00 | 1.00 | 1.00 | 1 |
| Fungal infection | 1.00 | 1.00 | 1.00 | 2 |
| GERD | 1.00 | 1.00 | 1.00 | 1 |
| Gastroenteritis | 1.00 | 1.00 | 1.00 | 1 |
| Heart attack | 1.00 | 1.00 | 1.00 | 1 |
| Hepatitis B | 1.00 | 1.00 | 1.00 | 1 |
| Hepatitis C | 1.00 | 1.00 | 1.00 | 1 |
| Hepatitis D | 1.00 | 1.00 | 1.00 | 1 |
| Hepatitis E | 1.00 | 1.00 | 1.00 | 1 |
| Hypertension | 1.00 | 1.00 | 1.00 | 1 |
| Hypothyroidism | 1.00 | 1.00 | 1.00 | 1 |
| Hypoglycemia | 1.00 | 1.00 | 1.00 | 1 |
| Hypothyroidism | 1.00 | 1.00 | 1.00 | 1 |
| Impetigo | 1.00 | 1.00 | 1.00 | 1 |
| Jaundice | 1.00 | 1.00 | 1.00 | 1 |
| Malaria | 1.00 | 1.00 | 1.00 | 1 |
| Migraine | 1.00 | 1.00 | 1.00 | 1 |
| Osteoarthritis | 1.00 | 1.00 | 1.00 | 1 |
| Paralysis (brain hemorrhage) | 1.00 | 1.00 | 1.00 | 1 |
| Peptic ulcer disease | 1.00 | 1.00 | 1.00 | 1 |
| Pneumonia | 1.00 | 1.00 | 1.00 | 1 |
| Psoriasis | 1.00 | 1.00 | 1.00 | 1 |
| Tuberculosis | 1.00 | 1.00 | 1.00 | 1 |
| Typhoid | 1.00 | 1.00 | 1.00 | 1 |
| Urinary tract infection | 1.00 | 1.00 | 1.00 | 1 |
| Varicose veins | 1.00 | 1.00 | 1.00 | 1 |
| hepatitis A | 1.00 | 1.00 | 1.00 | 1 |
| accuracy | | | 1.00 | 42 |
| macro avg | 1.00 | 1.00 | 1.00 | 42 |
| weighted avg | 1.00 | 1.00 | 1.00 | 42 |

Confusion Matrix



Accuracy

| | Training Accuracy | Validation Accuracy | Testing Accuracy |
|--------------------------------|-------------------|---------------------|------------------|
| K Nearest Neighbors Classifier | 1.0 | 1.0 | 1.00000 |
| Support Vector Machines | 1.0 | 1.0 | 1.00000 |
| Decision Trees Classifier | 1.0 | 1.0 | 0.97619 |
| Random Forest Classifier | 1.0 | 1.0 | 0.97619 |

| | | | |
|----|----------------|---|---|
| 2. | Tune the Model | Hyperparameter Tuning - Validation Method - | <pre>rfc = RandomForestClassifier(max_depth = 13) rfc.fit(X_train, y_train)</pre> |
|----|----------------|---|---|