## **Comparison of Machine Learning Model Accuracies**

## **Using accuracy score**

|                        |         | Swelling | Redness  | Fever    | Headache | Muscle_Pain | Tiredness | Coughing | Diarrhea  |
|------------------------|---------|----------|----------|----------|----------|-------------|-----------|----------|-----------|
|                        | (train) | 0.90625  | 0.977679 | 0.98214  | 0.78125  | 0.61012     | 0.65179   | 0.92560  | 0.96726   |
| SVM                    | (test)  | 0.91667  | 0.988095 | 0.99405  | 0.76786  | 0.57738     | 0.60119   | 0.90476  | 0.97619   |
| Logistic<br>Regression | n       |          |          |          |          |             |           |          |           |
| (train)                |         | 0.90625  | 0.977678 | 0.982142 | 0.78125  | 0.623511    | 0.651785  | 0.925595 | 0.967261  |
| (test)                 |         | 0.91666  | 0.988095 | 0.994047 | 0.767857 | 0.565476    | 0.601190  | 0.904761 | 0.976190  |
|                        |         |          |          |          |          |             |           |          |           |
| Decision Tree          |         |          |          |          |          |             |           |          |           |
| (train)                |         | 1.0      | 1.0      | 1.0      | 1.0      | 1.0         | 1.0       | 1.0      | 1.0       |
| (test)                 |         | 0.839285 | 0.964285 | 0.970238 | 0.678571 | 0.547619    | 0.517857  | 0.797619 | 0.952380  |
|                        |         |          |          |          |          |             |           |          |           |
| Randomfo<br>(train)    | rest    | 1.0      | 1.0      | 1.0      | 1.0      | 1.0         | 1.0       | 1.0      | 1.0       |
| (test)                 |         | 1.0      | 1.0      | 1.0      | 0.767857 | 0.5773809   | 0.5773809 | 0.904761 | 0.9761904 |

|                        |         | Nausea_and_<br>vomiting | Breathlessne<br>ss | Joint_Pain | Fainted  | Anaphylactic_Re action | Tinglin  | Swollen_Lymph<br>_Nodes |
|------------------------|---------|-------------------------|--------------------|------------|----------|------------------------|----------|-------------------------|
|                        | (train) | 0.98214                 | 0.98512            | 0.98810    | 0.99851  | 0.99554                | 0.93304  | 0.99702                 |
| SVM                    | (tset)  | 0.99405                 | 0.99405            | 0.97024    | 1.0      | 1.0                    | 0.92262  | 0.98810                 |
| Logistic<br>Regression |         |                         |                    |            |          |                        |          |                         |
| (train)                |         | 0.982142                | 0.985119           | 0.988095   | 0.998511 | 0.995535               | 0.933035 | 0.997023                |
| (test)                 |         | 0.994047                | 0.994047           | 0.9702380  | 1.0      | 1.0                    | 0.922619 | 0.988095                |
|                        |         |                         |                    |            |          |                        |          |                         |
| Decision               | Tree    |                         |                    |            |          |                        |          |                         |
| (train)                |         | 1.0                     | 1.0                | 1.0        | 1.0      | 1.0                    | 1.0      | 1.0                     |
| (test)                 |         | 0.940476                | 0.976190           | 0.958333   | 1.0      | 0.994047               | 0.857142 | 0.976190                |
|                        |         |                         |                    |            |          |                        |          |                         |

| Randomforest (train) | 1.0       | 1.0       | 1.0        | 1.0 | 1.0 | 0.9985119  | 1.0        |
|----------------------|-----------|-----------|------------|-----|-----|------------|------------|
| (test)               | 0.9940476 | 0.9940476 | 0.97023809 | 1.0 | 1.0 | 0.92261904 | 0.98809523 |
|                      |           |           |            |     |     |            |            |