

## Project Development Phase Model Performance Test

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|---------------|--|
| Date          | 10 February 2026   |
| Team ID       | LTVIP2026TMIDS54583  |
| Project Name  | Exploratory-Analysis-of-Rainfall-Data-in-India-for-Agriculture |
| Maximum Marks | 4  |

### Model Performance Testing

| S.No | Parameter                    | Values  | Screenshot   |
|------|------------------------------|---|--|
| 1    | Model Summary                | Artificial Neural Network (ANN) / Random Forest Regression Model used for Rainfall Prediction. Input features include rainfall data (10 years), temperature, humidity, and climate trends.  |  |
| S.No | Parameter                    | Values  | Screenshot   |
| 1    | Model Summary                | Artificial Neural Network (ANN) / Random Forest Regression Model used for Rainfall Prediction. Input features include rainfall, data (10 years), temperature, humidity, and climate trends. | <p><b>Rainfall Prediction Model</b></p> <ul style="list-style-type: none"> <li>Model type: <ul style="list-style-type: none"> <li>ANN, Random Forest Regression</li> </ul> </li> <li>Input Features: <ul style="list-style-type: none"> <li>Rainfall data (past 10 years)</li> <li>Climate Trends</li> </ul> </li> </ul> <p>Model Summary:</p> <ul style="list-style-type: none"> <li>Adjusted R-squared: 0.92</li> <li>Adjusted R-squared: 0.92</li> <li>Adjusted R-squared: 0.92</li> <li>Adjusted R-squared: 0.92</li> </ul> <p>Training Accuracy: 92%    Validation Accuracy: 88%</p> <p>Training Accuracy: 92%</p> <p>Training vs. Validation Accuracy</p> <p>Validation Accuracy after Fine Tuning</p> |
| 2    | Accuracy                     | Training Accuracy – 92%<br>Validation Accuracy – 88%  | <p><b>Validation Accuracy after Tuning</b></p> <p>0.97<br/>0.80</p> <p>91%</p>   |
| 3    | Fine Tuning Result (if Done) | Validation Accuracy after tuning – 91%  |  |
|      |                              | Training Accuracy 92% : Validation Accuracy: After tuning after tested accuracy. <b>91</b>  |  |
|      |                              | Validation Accuracy improved to 91%.  |  |