Neural Network Report

# Model Description

Algorithm: Neural Network

Hyperparameters: alpha=0.0, hidden\_layer\_sizes=(10,), max\_iter=300

Note: Data was normalized before training and predictions were denormalized for evaluation.

# Performance Metrics

|  |  |  |
| --- | --- | --- |
| Metric | Training | Testing |
| R-squared | 0.9207 | 0.9470 |
| RMSE | 0.2209 | 0.2037 |
| MAE | 0.1631 | 0.1411 |

# Feature Importance

Feature importance was calculated using a permutation-based approach. This method measures how much the model's performance decreases when each feature is randomly shuffled.

|  |  |
| --- | --- |
| Feature | Importance (%) |
| petal width (cm) | 94.40 |
| petal length (cm) | 3.70 |
| sepal width (cm) | 1.80 |
| sepal length (cm) | 0.10 |