

Sri Lanka Institute of Information Technology



Model Comparison

2025-Y2-S1-KU-06

**Artificial Intelligence and Machine Learning
IT2011**

B.Sc. (Hons) in Information Technology

Models Developed

1. Artificial Neural Network - IT24102338
2. KNN - IT24101310
3. Random Forest - IT24100841
4. Logistic Regression - IT24100063
5. Decision Tree – IT24100442
6. SVM - IT24102656

Evaluation Metric Comparison

Model	Accuracy	Precision	Recall	F1 Score	ROC AUC
Logistic Regression	0.9132	0.9605	0.8957	0.9269	0.9184
KNN	0.8905	0.9652	0.8527	0.9055	0.9018
SVM	0.9169	0.9731	0.8895	0.9294	0.9251
Decision Tree	0.9735	0.9698	0.9877	0.9787	0.9693
Random Forest	0.9811	0.9876	0.9815	0.9846	0.9809
ANN	0.9358	0.9679	0.9263	0.9467	0.9386

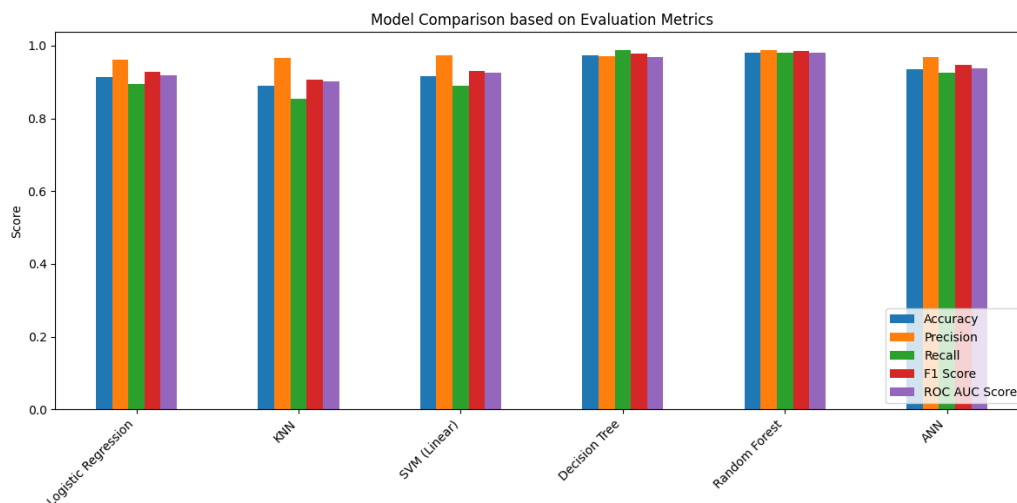


Figure 1: Evaluation Metric Bar Plot

Finally Selected Model: Random Forest Model

Reasoning: Due to overall highest evaluation metrics