**Heaven’s Light is Our Guide**



*Department of Computer Science & Engineering*

*Rajshahi University of Engineering & Technology*

Lab Manual

**Course Title:** Sessional based on CSE 4119

**Course No.**: CSE 4120

**Credit:** 0.75

**Reference Book:**

[1] Jiawei Han, Micheline Kamber, and Jian Pei, “Data Mining: Concepts and Techniques”

**Dataset:** Iris Dataset (Fisher’s Iris Flower Data)

**Experiments/Problems:**

**[Week 5.a]** Classification using Decision Trees

**Objective:** Build and evaluate decision trees.

**Topics:** Entropy, Gini index, overfitting.

**Tasks:**

* Train/test a decision tree on a labelled dataset.
* Visualize the tree and compute accuracy.
* Use cross-validation.

**[Week 5.b]** Classification using Naïve Bayes

**Objective:** Apply probabilistic classification.

**Topics:** Bayes theorem, text classification.

**Tasks:**

* Use Naïve Bayes to classify emails or text.
* Analyze confusion matrix, precision, recall.
* Apply Laplace smoothing.