Indian Institute of Technology Dharwad
CS214: Artificial Intelligence Laboratory
Credits: 0-0-3-3 (L-T-P-C)

Lab Exercises:
- Lab to be conducted on a 3-hour slot. It will be conducted in tandem with the theory course so the topics for problems given in the programming assignment are already initiated in the theory class. The topics taught in the theory course should appropriately be sequenced for synchronization with the laboratory.
  - Lab 1: Data visualization – statistics from data
  - Lab 2: Data preprocessing – missing values, outlier identification and removal
  - Lab 3: Data preprocessing – normalization and standardization, Classification using different techniques
  - Lab 4: Data preprocessing – data reduction using PCA
  - Lab 5-7: Classification using different techniques
  - Lab 8-10: Regression using different techniques
  - Lab 11-12: Clustering using different techniques
- **Programming environment**: Python programming, pandas, python-based toolbox scikit-learn

Sl. No.	Date	Description
Lab1	13 January 2025	Data Visualization and Descriptive analytics
Lab2	20 January 2025	Data Preprocessing: Handling Missing Values
Lab3	27 January 2025	Data Preprocessing: Outlier Detection, Attribute Normalization and Standardization
Lab4	03 February 2025	Data Preprocessing: Dimension Reduction Classification
Lab5	10 February 2025	Classification
Lab6	17 February 2025	Classification
Lab7	10 March 2025	Classification
Lab8	17 March 2025	Regression
Lab9	24 March 2025	Regression
Lab10	02 April 2025	Regression
Lab11	07 April 2025	Clustering
Lab12	14 April 2025	Clustering
Lab13	21 April 2025	**Lab Exam**

Instructor:

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Evaluation Pattern: Lab evaluations (70), Lab exam (30)

Lab Hours and Slot: H1, I1, J1 slots **-** Monday (02:00 PM – 04:50 PM)
Venue: **CIF 401** and **402**

Attendance Requirement: **100%**
Other Requirements: 1. Switch off your mobile phone inside the classroom.
                       2. Be punctual to the class. Late arrival is not entertained.