

UCT31021 – PRACTICAL FOR ARTIFICIAL INTELLIGENCE
DEPARTMENT OF ICT
FACULTY OF TECHNOLOGY
SOUTH EASTERN UNIVERSITY OF SRILANKA

Lab sheet: 11

Date: 29th of May 2025

Title: Pandas for AI

Aims:

- Work with Python Pandas Library

Task:01

1. What is panda?

Panda is a powerful python library for data manipulation and analysis. It provides an easy to use data structure which are series & dataframes.

2. Create Series in pandas.

3. Creating Dataframe in pandas.

4. Data saving in Excel.

5. Dataframe Operations

- ✓ View First row

- ✓ View Last row

- ✓ View dataframe info

- ✓ View dataframe description

- ✓ Selecting, Filtering, select by label (already finished)

6. Create Dataframe with missing values.

7. Handling missing value using Pandas

- ✓ Drop missing value

- ✓ Fill missing values

- ✓ Interpolation

8. Data Transformation

- ✓ Renaming Columns

- ✓ Changing Data Types

- ✓ Creating or Modifying Column

Task:02

1. Random Dataset Creation
2. Check missing value
3. Handling missing Data
4. Transform your Data
5. Combining & Merging Dataframes
 - ✓ Concatenation
 - ✓ Merging
 - ✓ Joining
6. Group Data
 - ✓ Iterate over groups
 - ✓ Apply Aggregation
7. Calculating Summary Statistics for Group Data
 - ✓ Aggregation using groupby
 - ✓ Aggregation using pivot_table
 - ✓ Custom Aggregation using .agg()