**ANNAMALAI UNIVERSITY**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**DSCP 409. DATA SCIENCE LAB**

**COURSE TEACHER: Dr. R. Ragupathy, Associate Professor, Dept. of CSE, AU**

**LIST OF EXPERIMENTS**

**CYCLE - I**

1. Study of Python Data Science Environment
2. Operations on Python Data Structures
3. Array Operations using Numpy
4. Operations on Pandas Dataframe
5. Data Cleaning and Processing in CSV Files
6. Handling CSV Files
7. Handling HTML and Excel Files

**CYCLE** - II

1. Processing Text Files
2. Data Wrangling (Pivot Table, Melt, Concat)
3. Generating Line Chart and Bar Graph using Matplotlib
4. Display Data in Geographical Map
5. Display Data in Heatmap
6. Normal and Cumulative Distribution
7. Hypothesis Testing

**ADDITIONAL EXERCISES**

1. Generation of Factor Pairs of a Given Integer
2. Average Pooling on a Given *n x n* Matrix with a *m x m* Kernel