AMRITA VISHWA VIDYAPEETHAM

*Amrita School of Computing*

*Amaravati Campus – 522503*



**19CSE304 – Foundations Of Data Science Lab Manual**

***Year: 2024-2025 (Odd Semester)***

**Name : Reg. No : Semester:**



Certified that this is the bonafide record of practical work done by

Sri/Kum.…………………………………………………………, with Roll number …………………... in the 19CSE304 – Foundations of Data Science laboratory, of this institution, as prescribed by the Amrita Vishwa Vidyapeetham for the ……… Semester B. Tech during the year 2024-2025 (Odd Semester).

***Course Instructor Course Mentor/Coordinator***

**List of Experiments**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Experiment Number** | **Experiment Name** | **Pg. No** | **Date** | **Signature of the Faculty** |
| 1 | Basic problems - list, dictionary, tuple, set |  | 13.08.24 |  |
| 2 | Codes using NumPy [Basic] |  | 17.08.24 |  |
| 3 | Pandas, Merging and Concatenating Tables  (with Creation of Tables) |  | 20.08.24 |  |
| 4 | Handling Missing Values |  | 27.08.24 |  |
| 5 | Pearson Coefficient & PCA |  | 10.09.24 |  |
| 6 | Visualizing Data – 1  (Scatter, Line, Bar graphs) |  | 17.09.24 |  |
| 7 | Visualizing Data – 2  (Histograms,  Pie Charts, Heat maps, Box plot) |  | 21.09.24 |  |
| 8 | Sampling and Distribution |  | 01.10.24 |  |
| 9 | Probability Distributions (eg: Binomial) |  | 15.10.24 |  |
| 10 | Hypothesis Testing |  | 22.10.24 |  |
| 11 | Comparing Two Samples (A/B Testing, Deflategate, Causality) |  | 29.10.24 |  |
| 12 | Estimating the unknown Parameter (Percentile Method, Bootstrap Method, Confidence Intervals) |  | 05.11.24 |  |
| 13 | Prediction and Classification |  | 12.11.24 |  |
| 14 | Assignment 1 |  | 08.10.24 |  |