**Lab Details: Industrial Artificial Intelligence with Cloud Computing**

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| --- | --- | --- | --- | --- |
| Module | Experiment No. | Experiment Title | Location | GitHub Link |
| Foundation | Lab 1 | Demonstrating Artificial Intelligence Applications | 1.1  Slide# 12 | [SDP\_AI\_CC/Lab 1 Demonstrating AI Applications with ChatGPT.docx at main · BhartiV93/SDP\_AI\_CC (github.com)](https://github.com/BhartiV93/SDP_AI_CC/blob/main/Lab%201%20Demonstrating%20AI%20Applications%20with%20ChatGPT.docx) |
| Foundation | Lab 2 | Demonstrating the Installation of Anaconda Navigator and writing the first program in Python | 1.2  Slide# 8 |  |
| Foundation | Lab 3 | Python Basics | 1.2  Slide# 28 |  |
| Foundation | Lab 4 | Python Data Structures | 1.2  Slide# 34 |  |
| Foundation | Lab 5 | Python Control Statements | 1.2  Slide# 39 |  |
| Foundation | Lab 6 | Implementing OOPS Concepts in Python | 1.2  Slide# 47 |  |
| Foundation | Lab 7 | Python Connection with Database | 1.2  Slide# 54 |  |
| Foundation | Lab 8 | Practicing NumPy | 1.3  Slide# 12 |  |
| Foundation | Lab 9 | Practicing Matplotlib | 1.3  Slide# 16 |  |
| Foundation | Lab 10 | Practicing Seaborn | 1.3  Slide# 18 |  |
| Foundation | Lab 11 | Practicing Pandas | 1.3  Slide# 20 |  |
| Foundation | Lab 12 | Web Scrapping with Python | 1.3  Slide# 32 |  |
| Foundation | Lab 13 | A Data Analysis case study using techniques of EDA. | 1.3  Slide# 33 |  |
| Core | Lab 14 | Create a Machine Learning Model Using Lobe’s Image Classification Feature . | 2.1 a  Slide# 17 |  |
| Core | Lab 15 | Handling Missing Data. | 2.1 a  Slide# 32 |  |
| Core | Lab 16 | Importing dataset and splitting data | 2.1 a  Slide# 35 |  |
| Core | Lab 17 | Implementing Linear Regression | 2.1 a  Slide# 52 |  |
| Core | Lab 18 | Implementing Logistic Regression | 2.1 a  Slide# 59 |  |
| Core | Lab 19 | Implementing Decision Tree | 2.1 a  Slide# 66 |  |
| Core | Lab 20 | Implementing Random Forest | 2.1 a  Slide# 72 |  |
| Core | Lab 21 | Implementing Naïve Bayes | 2.1 b  Slide# 13 |  |
| Core | Lab 22 | Implementing Support Vector Machine | 2.1 c  Slide# 9 |  |
| Core | Lab 23 | Implementing K-Means Clustering | 2.1 d  Slide# 19 |  |
| Core | Lab 24 | Implementing Ensemble Learning Methods | 2.1 e  Slide# 13 |  |
| Core | Lab 25 | Developing a full-fledged project using different ML algorithms and python packages from scratch | 2.1 e  Slide# 14 |  |
| Core | Lab 26 | Predicting with MLP | 2.2  Slide# 24 |  |
| Core | Lab 27 | Implementing CNN Classifier | 2.2  Slide# 35 |  |
| Core | Lab 28 | Implementing RNN Classifier | 2.2  Slide# 38 |  |
| Core | Lab 29 | Implementing LSTM and BiLSTM Classifier | 2.2  Slide# 43 |  |
| Core | Lab 30 | Developing a full-fledged project using different DL algorithms and python packages from scratch | 2.2  Slide# 44 |  |
| Advance | Lab 31 | Implementing Hyper Tuning Techniques | 3.1 a  Slide# 8 |  |
| Advance | Lab 32 | Implementing Optimization Techniques | 3.1 b  Slide# 25 |  |
| Advance | Lab 33 | Introduction to Azure Portal | 3.2 a  Slide# 31 |  |
| Advance | Lab 34 | Creating VM on Azure | 3.2 a  Slide# 38 |  |
| Advance | Lab 35 | Creating VNet on Azure | 3.2 a  Slide# 59 |  |
| Advance | Lab 36 | Getting started with single databases in Azure SQL Database | 3.2 b  Slide# 9 |  |
| Advance | Lab 37 | Getting started with Azure ML Designer | 3.2 c  Slide# 6 |  |
| Advance | Lab 38 | Getting started with Azure ML Notebook | 3.2 c  Slide# 8 |  |
| Advance | Lab 39 | Using Cognitive Services in Python Scripts | 3.2 d  Slide# 10 |  |
| Advance | Lab 40 | Using OpenAI Services | 3.2 e  Slide# 6 |  |