**Lab Workbook**

Logo

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Faculty Name: **Dr. Neetu Singla** Student Name: **Piyush Gambhir**

Roll No.: **21CSU349**

Semester: **VI**

Group: **AIML-B (A3)**

Department of Computer Science and Engineering The NorthCap University

Gurugram- 122017, India

Session 2023-24

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| **4** | To build an ANN model for classification problem on diabetes classification to see the effect of:  a. Early Stopping  b. Dropouts |  |
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GitHub Repository Link:

[ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/tree/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual)

**Experiment No: 1**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 1/Experiment 1.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%201/Experiment%201.ipynb) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):**  To explore the basic features of TensorFlow and Keras Package. |

**Experiment No: 2**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 2/Experiment 2.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%202/Experiment%202.ipynb) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):**  To build an ANN model to convert temperature in degree Celsius to Fahrenheit |

**Experiment No: 3**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 3/Experiment 3.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%203/Experiment%203.ipynb) |
| **Date:** |
| **Faculty Signature:** |
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| **Objective(s):**  To build an ANN model for regression problem for house price predication dataset |

**Experiment No: 4**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 4/Experiment 4.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%204/Experiment%204.ipynb) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):**  To build an ANN model for classification problem on diabetes classification to see the effect of:  a. Early Stopping  b. Dropouts |

**Experiment No: 5**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 5/Experiment 5.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%205/Experiment%205.ipynb) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):** |

**Experiment No: 6**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 6/Experiment 6.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%206/Experiment%206.ipynb) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):** |

**Experiment No: 7**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/tree/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):**  To create CNN model with dataset containing images of cats and dogs for image classification |

**Experiment No: 8**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 7/Experiment 7.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%207/Experiment%207.ipynb) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):**  To build an image classifier with Keras and Convolutional Neural Networks for the Fashion MNIST dataset. |

**Experiment No: 9**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 9/Experiment 9.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%209/Experiment%209.ipynb) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):** |

**Experiment No: 10**

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| **Student Name and Roll Number:** Piyush Gambhir – 21CSU349 |
| **Semester /Section**: 6th Semester – AIML-B (A3) |
| **Link to Code:** [ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 10/Experiment 10.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)](https://github.com/piyush-gambhir/ncu-lab-manual-and-end-semester-projects/blob/main/NCU-CSL312%20-%20DL%20-%20Lab%20Manual/Experiment%2010/Experiment%2010.ipynb) |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):**  To implement transfer 1earing using the pre-trained model (VGG16) on image dataset. |