

Lab Workbook



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

Roll No.: 21CSU349

Semester: VI

Group: AIML-B (A3)

Department of Computer Science and EngineeringThe NorthCap University Gurugram- 122017, India Session 2023-24

DL (CSL312) Lab Workbook Session: 2023-24



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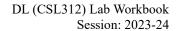
S.No.	TITLE	
1	To explore the basic features of TensorFlow and Keras Package.	
2	To build an ANN model to convert temperature in degree Celsius to Fahrenheit	
3	To build an ANN model for regression problem or house predication dataset.	
4	To build an ANN model for classification problem on diabetes classification to see the effect of: a. Early Stopping b. Dropouts	
5	To build an advance ANN classification model for chur modelling data with: a. Cross Validation b. Grid Search c. Checkpoint	
6	To perform Convolutional Neural Networks for Image Classification on MNSIT Dataset	
7	To create CNN model with dataset containing images of cats and dogs for image classification	
8	To build an image classifier with Keras and Convolutional Neural Networks for the Fashion MNIST dataset.	
9	To train a CNN model to classify images from the CIFAR-10 dataset.	
10	To implement transfer 1earing using the pre-trained model (VGG16) on image dataset.	

DL (CSL312) Lab Workbook Session: 2023-24



GitHub Repository Link:

 $\frac{\text{ncu-lab-manual-and-end-semester-projects/NCU-CSL312-DL-Lab Manual at main}}{\text{gambhir/ncu-lab-manual-and-end-semester-projects (github.com)}}$



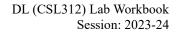


Student Name and Roll Number: Piyush Gambhir – 21CSU349
Semester /Section: 6 th Semester – AIML-B (A3)
Link to Code: ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment
1/Experiment 1.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)
Date: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

Objective(s):

Marks:

To explore the basic features of TensorFlow and Keras Package.

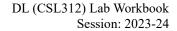




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Semester /Section: 6 th Semester – AIML-B (A3)
Link to Code: ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment
2/Experiment 2.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)
Date:
Faculty Signature:
Marks:

Objective(s):

To build an ANN model to convert temperature in degree Celsius to Fahrenheit





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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)

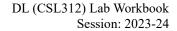
Date:

Faculty Signature:

Marks:

Objective(s):

To build an ANN model for regression problem for house price predication dataset





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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)

Date:

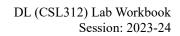
Faculty Signature:

Marks:

Objective(s):

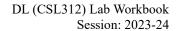
To build an ANN model for classification problem on diabetes classification to see the effect of:

- a. Early Stopping
- b. Dropouts





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Semester /Section: 6 th 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)		
Date:		
Faculty Signature:		
Marks:		
Objective(s):		



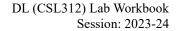


Student Name and Roll Number: Piyush Gambhir – 21CSU349

Experiment No: 6

Semester /Section: 6 th 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)
Date:
Faculty Signature:
Marks:

Objective(s):		





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Semester / Section: 6th Semester – AIML-B (A3)

 $\textbf{Link to Code:} \ \underline{\text{ncu-lab-manual-and-end-semester-projects/NCU-CSL312-DL-Lab Manual at main \cdot piyush-piyush$

gambhir/ncu-lab-manual-and-end-semester-projects (github.com)

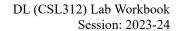
Date:

Faculty Signature:

Marks:

Objective(s):

To create CNN model with dataset containing images of cats and dogs for image classification



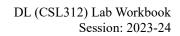


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Semester /Section: 6 th Semester – AIML-B (A3)
Link to Code: ncu-lab-manual-and-end-semester-projects/NCU-CSL312 - DL - Lab Manual/Experiment 7/Experiment 7.ipynb at main · piyush-gambhir/ncu-lab-manual-and-end-semester-projects (github.com)
Date:
Faculty Signature:

Objective(s):

Marks:

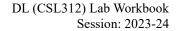
To build an image classifier with Keras and Convolutional Neural Networks for the Fashion MNIST dataset.





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Semester /Section: 6 th 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)		
Date:		
Faculty Signature:		
Marks:		

Objective(s):		





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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)

Date:

Faculty Signature:

Marks:

Objective(s):

To implement transfer 1earing using the pre-trained model (VGG16) on image dataset.