

# Assignment 2(8th to 22nd September 2024)

9/22/2024

10 Points Possible

Attempt 1



In Progress

**NEXT UP: Submit Assignment**



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## 3 Attempts Allowed


9/8/2024 to 9/22/2024

### Details

#### Part 2A: Implementation (6 marks)

**Objective:** Implement one of the papers chosen in Part A using Python TensorFlow Keras or Pytorch Libraries.

#### Instructions:

- **Implement the Paper:** Utilize the methodologies or algorithms detailed in your chosen paper. Ensure that the URL for the dataset (public dataset) is mentioned clearly.
- **Code Submission:** Upload the Python .ipynb file. Download the .ipynb file as a PDF, ensuring all outputs are clearly displayed. ZIP files are not accepted.
- **Assignment Template:** Use the provided DNN\_Assignment2a\_Template.ipynb file or Google Colab for your work.
  - (<https://bits-pilani.instructure.com/courses/2519/files/496071?wrap=1>)  
[DNN\\_Assignment2a\\_Template.ipynb](#) (<https://bits-pilani.instructure.com/courses/2824/files/570587?wrap=1>)  ([https://bits-pilani.instructure.com/courses/2824/files/570587/download?download\\_frd=1](https://bits-pilani.instructure.com/courses/2824/files/570587/download?download_frd=1))  
([https://bits-pilani.instructure.com/courses/2519/files/496071/download?download\\_frd=1](https://bits-pilani.instructure.com/courses/2519/files/496071/download?download_frd=1))  
(<https://bits-pilani.instructure.com/courses/2804/files/569888?wrap=1>)
- **File Naming Convention:** DNN\_assignment\_2a\_group##.
- **Libraries:** Use TensorFlow/Keras/Pytorch
- **Plagiarism & Late Submissions:** Any plagiarism will result in zero marks. Late submissions incur a penalty of (-2) marks.

#### Part 2B: Implement the following topics demonstrated (Lab sheets) in the webinar. (4 marks)

1. Deep Neural Networks and Comparative analysis of optimizer performance
2. Convolutional Neural Networks (CNN)
3. Gated Recurrent Units (GRU)

## 4. Long Short-Term Memory (LSTM)

### Instructions:

- **Implement the Lab code:** Execute the code in Lab sheets as uploaded in the module section. The implementation should follow the instructions provided in the lab sheets.
- **Code Submission:** Upload the Python .ipynb file. Download the .ipynb file as a PDF, ensuring all outputs are clearly displayed. ZIP files are not accepted.
- **File Naming Convention:** DNN\_assignment\_2b\_group##. (Follow the same Template as given in "DNN\_Assignment2a\_Template.ipynb" and change based on the networks )
- **Plagiarism & Late Submissions:** Any plagiarism will result in zero marks. Late submissions incur a penalty of (-2) marks.

### Additional Instructions:

- Data need not be uploaded with the submission.
- Submit the updated Jupyter Notebook with outputs + the final .ipynb notebook file converted as PDF, with proper formatting and alignment.
- Incomplete output, misalignment, or lack of comments may result in mark deductions.
- If the given template is not followed, ZERO marks will be awarded.
- Journals can be chosen without any restrictions on impact factors or other indices.
- If the dataset URL is not provided in the research papers, utilize datasets from publicly accessible resources.
- For any queries, use the discussion forum.

### ✓ View Rubric

#### Assignment 2 Rubrics (1)

Criteria	Ratings		Pts
Is alignment with a journal submitted in Assignment-1 <a href="#">view longer description</a>	0.5 to >0 pts Full Marks	0 pts No Marks	/ 0.5 pts
Data Acquisition: Provided the URL of the data used.	0.5 to >0 pts Full Marks	0 pts No Marks	/ 0.5 pts
Data Preparation: Performed the data preprocessing?	0.5 to >0 pts Full Marks	0 pts No Marks	/ 0.5 pts

## Assignment 2 Rubrics (1)

Criteria	Ratings		Pts
DNN Architecture used?	<b>1 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 1 pts
Number of layers with justification provided?	<b>0.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 0.5 pts
Number of units in each layer with justification provided?	<b>0.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 0.5 pts
Model training details provided?	<b>0.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 0.5 pts
Model Testing details provided?	<b>0.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 0.5 pts
Report Result: <a href="#">view longer description</a>	<b>1.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 1.5 pts
Implemented Deep Neural Networks and Comparative analysis of optimizer performance?	<b>0.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 0.5 pts
Uploaded pdf and ipynb files (Deep Neural Networks and Comparative analysis of optimizer performance)?	<b>0.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 0.5 pts
Implemented Convolutional Neural Networks (CNN)?	<b>0.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 0.5 pts
Uploaded pdf and ipynb files (CNN)	<b>0.5 to &gt;0 pts Full Marks</b>	<b>0 pts No Marks</b>	/ 0.5 pts


Assignment 2 Rubrics (1)

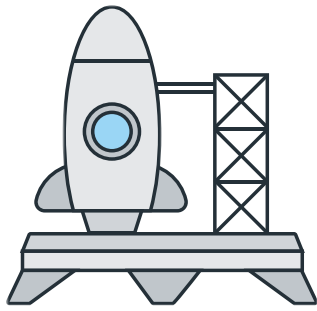
Criteria	Ratings		Pts
Implemented Gated Recurrent Units (GRU)?	0.5 to >0 pts Full Marks	0 pts No Marks	/ 0.5 pts
Uploaded pdf and ipynb files (GRU)?	0.5 to >0 pts Full Marks	0 pts No Marks	/ 0.5 pts
Implemented Long Short-Term Memory (LSTM)?	0.5 to >0 pts Full Marks	0 pts No Marks	/ 0.5 pts
Uploaded pdf and ipynb files (LSTM)?	0.5 to >0 pts Full Marks	0 pts No Marks	/ 0.5 pts
late submission (-2)	0 pts Full Marks	0 pts No Marks	/ 0 pts
			Total Points: 0

Keep in mind, this submission will count for everyone in your Assignment Groups group.

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