

Deep Learning - I

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Instructions

- This is a coding assignment. The code has to be written in Python. You have to use **Python** ≥ 3 , **pytorch** ≥ 1.2 and **tensorflow** ≥ 2.0 to solve all the problems. Please mention the version you have used in the report.
- The assignment deliverable is your python code, saved model and your report of observations.
- A google form will be sent through Piazza. You need to fill the form with your github repository details.
- You are encouraged to discuss among yourselves, but **DO NOT COPY** solutions or code. The consequences will be severe.
- Read the complete assignment carefully, before attempting to solve it.
- Follow the instructions provided for test execution of your code, the formats for input and output files and the naming conventions. — [Detailed Instructions](#)
- The submission deadline is **January 27, 2020**.

Best of luck for the assignment. HAPPY CODING!
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How to run

The test file will be shared through Piazza. The performance of your code will be tested on the test file. Your code should generate two output files for **Software1.txt** and **Software2.txt** respectively. I should be able to run the code in the following format:

To test the model :

```
python main.py --test-data <test_file>
```

Assignment Deliverable

- Prepare a report and name it **Deep_Learning_Report_1.pdf**. In your report, you need to briefly describe what you have done, present the results (in a form you think is good) and provide a brief discussion of the results you obtained. Please feel free to play with the model architecture and hyper-parameter settings. Please make it concise and to-the-point.
- The name of output file for various tasks needs to be **Software1.txt** and **Software2.txt**. Put them into the same directory of *main.py* file.
- You need to save the trained model in a specific format and put it in *model* directory. During test time, your code should use this saved model and not retrain it from scratch.

Sample Input and Output

A sample input and output file will be shared through piazza. You have to follow the same format, otherwise the automatic evaluation might fail and you will be penalised for that.