

Assignment Week 5: Named Entity Extraction with BERT

1. Data Preparation :

- Load the CoNLL-2003 dataset using HuggingFace
- Implement data preprocessing
- Create data loaders

2. Model Implementation:

- Implement the NERModel class
- Add necessary loss functions
- Implement forward pass

3. Training:

- Set up training loop
- Implement gradient updates
- Add progress tracking

4. Evaluation:

- Implement evaluation metrics
- Test model on validation set
- Generate classification report

Bonus Tasks:

- Implement early stopping
- Add learning rate scheduling
- Experiment with different BERT variants

Submission Requirements:

1. Submission instructions:

- a. Create a git repository called 'week_5_assignment'. Make sure it is public access. Upload your code and notebooks to the git repository with appropriate README.md instructions to run the code.
- b. Now create a pdf with the following content:

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My week 5 assignment submissions are as follows

1. GitHub repository link for code
[YOUR LINK] ## make sure to make the repository public access

2. REPORT

Your report should contain the following sections and should not exceed 500 words.

- Implementation challenges
- Performance analysis
- Potential improvements

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- c. Name the pdf file as your_name.pdf [replace your name for your_name].
- d. Upload the pdf file to the assignment box.