

E0-334 Deep Learning for NLP

Assignment 1

(due by 11th Aug, 11:59 PM)

Note: Use the following link for submitting your results.

<https://forms.office.com/r/OKHz0ueBts>

Problem: Design a feedforward neural network to solve the regression problem for the “Online News Popularity Dataset” available at

<https://archive.ics.uci.edu/ml/datasets/Online+News+Popularity#>.

The target variable for this problem is *shares*. Use the first 30000 examples for training and the remaining for test purpose. If \mathcal{D}_{test} denotes the test set, report the following error measure

$$E = \sqrt{\frac{1}{|\mathcal{D}_{test}|} \sum_{i \in \mathcal{D}_{test}} (y_i - \hat{y}_i)^2}$$

where y_i denotes the desired label and \hat{y}_i denotes the predicted label for the i -th test set instance.

Study the effects of

1. parameter initialization
2. learning rate and/or learning rate schedule
3. optimization method
4. batch size

on the training speed and the generalization performance of the network.