Homework 6

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Step 1

The scores from last week are

```
Base
  "best_validation_accuracy": 0.3760217983651226,
  "best_validation_precision": 0.30120481927710846,
  "best_validation_recall": 0.17985611510791366,
  "best_validation_f1_measure": 0.2252252252251784,
  "best_validation_loss": 1.4011307784489222

Elmo
  "best_validation_accuracy": 0.44232515894641233,
  "best_validation_precision": 0.33613445378151263,
  "best_validation_recall": 0.28776978417266186,
  "best_validation_f1_measure": 0.3100775193797953,
  "best_validation_loss": 1.2954552139554705

Bert
  "best_validation_accuracy": 0.44595821980018163,
  "best_validation_precision": 0.4342105263157895,
  "best_validation_recall": 0.4748201438848921,
  "best_validation_f1_measure": 0.45360824742263045,
  "best_validation_loss": 1.231014141014644
```

I choose BERT to work with, because it had better scores than the other two models.
Link to config:
https://github.com/kerstinakke/NLP_homework_5/blob/master/sst_classifier_bert.jsonnet

Step 2

The training loss was 1.187 and validation loss was 1.305. The training accuracy was 0.482 and validation accuracy validation accuracy 0.442. These scores suggest there is

some overfitting, but it's not too serious.
Changes:

1. weight_decay = 0.005; new training loss: 1.192, new validation loss: 1.243
   new training accuracy: 0.485, new validation accuracy : 0.448
   The new scores show that overfitting was reduced a bit. Validation accuracy did not significantly increase.

   This is the only change I tried, because I got the result I wanted.

Step 3

https://github.com/kerstinakke/NLP_homework_5/blob/master/transformer_seq2vec_encoder.py