Journal Report 4
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Daily Log

Monday September 23

Today, I'm continuing to listen to lecture 4 of the online course, which discusses backpropagation and gradient descent in more detail. I'm also continuing to work on the implementation of assignment 2, where I'm writing the gradient and softmax loss functions for the word2vec models. Today, I also went back and revisited some of my AI code to review how I'd implemented back and forward propagation in our perceptrons unit last year, because I don't remember everything and need a refresher.

Tuesday September 24

Today, I finished up assignment 2, in which I filled in pieces of the implementation of stochastic gradient descent with word vectors. I'm going to actually train some word vectors using the Stanford Sentiment Treebank (SST), but since this is supposed to take around an hour to run, I'm going to save this task for home. My current task in class now is going through the fifth lecture video, which is titled "Linguistic Structure: Dependency Parsing".

Thursday September 26

In class today, I finished watching lecture 5 on dependency parsing. In dependency parsing, you train a neural network to identify which words are dependents of another word. For example, in the simple sentence "Dogs run." the root of the dependency tree would be "run" and a dependent would be "dogs", which is the noun subject of the sentence. I began working on assignment 3, which is on dependency parsing. One of the homework problems was walking through dependency parsing by hand, which I was able to do correctly. Later in the assignment, I'll be using PyTorch to build a neural network model to perform the parsing.

Timeline

Date	Goal	Met
Sunday Sep 22	Implement methods with GloVe (global vectors for word representation). Lectures/exercises for week 2 of online course.	I've finished watching the lecture videos for week 2 of the course. I'm still finishing up the second assignment, in which I'm supposed to implement stochastic gradient descent.
Sunday Sep 29	Finish the stochastic gradient descent from week 2. Work on week 3 of online course. Be able to perform basic sentence classification using neural networks and word windows.	I finished the stochastic gradient descent model. I've gotten started on my sentence classification, but it's still a work in progress.
Sunday Oct 6	Complete sentence classification methods with neural networks and word windows. Get started on week 4 materials with RNNs.	
Sunday Oct 13	Finish up week 4 materials with RNNs for sentence classification.	

Reflection

This week, I finished my revision of backpropagation and gradient descent. I trained some word vectors of my own and got those to run as well. Then I moved on to using PyTorch to implement methods to perform setence classifications with neural networks, which is what I plan to continue working on in the coming week.