Journal 3-2

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1 Timeline

Feb 2	Research Computer Vision Techniques by going through CS231n from Stanford	I'll have a couple algorithms implemented and have a better background of how to approach the CV related problem
Feb 9	Begin implementing RL algorithm in the doom environment and Continue Viewing Karapathy's Lectures	Have kNN running alongside VizDoom and Get Lecture 3 in course
Feb 16	Continue viewing Karapathy's Lectures. Implement a basic Neural Network doing image detection in VizDoom	Get to Lecture 6 in Course, Have a NN doing some image detection in VizDoom
Feb 23	Continue viewing Karapathy's Lectures. Implement a CNN that does basic image proessing and detection in VizDoom	Get to Lecture 9 in Course. CNN that does basic image detection in VizDoom

2 Progress

This week I continued researching Linear Classification from Karapathy's CS231n Lectures. I learned about basic loss functions, such as Muliclass SVM Loss and made my own linear classifier in Python. Here is an excerpt from some notes I took while watching his lecture:

2.1 Muliclass SVM Loss

$$L_i = \sum_{j \neq y_i} max(0, s_j - s_{yi} + 1) \tag{1}$$

where j is the object with the highest score. y_i is the object which is trying to be classified. The loss of the function itself is:

$$L = 1/N \sum_{i=1}^{N} L_i \tag{2}$$

3 Project Discussion

Since progress has slowed since I got sick and last week we had vistors, I'm pushing my goal from last week to have a functional object detection algorithm by another two weeks. I will also have to work a little outside of class to account for some missed time but I hope to catch up so that I can get closer to my original deadline. Also, I have to start working on making my code work along side my agent this week.