
PROPOSAL FOR DRAGON DROP

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Objective

The purpose of this project is to provide a faster way to design and test neural network configurations than writing the code by hand. This will be accomplished through a graphical user interface where the user can drag and drop different neural network components, such as hidden and output layers composed of artificial neurons. The user will be able to feed the neural network data at the input layer to train it and then make predictions on new data after the model has been trained. This project could be extended to include more complex neural network components such as convolutional layers. These components would require more processing power which may be unavailable to users. In this case, this project could also be extended to provide a service, similar to AWS, that allows users to utilize remote processing power to run their neural networks.

Value Proposition

Neural networks are underutilized by programmers since not all programmers have the time or knowledge required to deploy them. Instead, programmers may choose to solve a problem using traditional methods that may be easier to deploy but less effective at solving their problem. This project aims to lower the barrier to entry by reducing the time required to deploy a neural network and by informing the user of the mechanisms within the network. In addition, a drag-and-drop interface would provide a quicker way to test different configurations that would normally involve editing code and programmers already familiar with neural networks.

Communication Plan

The group's primary form of communication will be via Slack throughout the week to keep team members up to date on progress made on individual assignments and to organize meetings. The group will be meeting outside of class 2-3 days a week to touch base, give feedback and assistance where needed, and re-distribute work as necessary. The group will contact Professor Suresh via email or in person in class as questions and issues arise.

The work for this product will be broken up into four main sections with each person acting as a section lead. Henry will lead the designing of the basic neural network, Connor will lead the designing of a script to modify the neural network to include the user inputted features, Griffin will lead the integration of the GUI and the back end, and Dan will lead the designing of the user interface. Each section lead is in charge of overseeing the tasks associated with their section. As tasks are completed, people will move between sections depending on where work needs to be done.

Action Plan

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