

Neural Network Project Proposal

Summary:

The Computer Science and Engineering Club wants to start a Neural Network Project. This is a simple yet daunting project to teach incoming students more about topics such as Deep Learning. The project is very specific and will act as an introduction or a doorway for students to learn Artificial Intelligence, Machine Learning and Deep Learning as well. A lot of incoming computer science students want to engage and learn more about the field and different aspects of it. Everything that they can do with the field and what opportunities there are for them. This would be a great way to introduce them to a currently booming AI field that they might find themselves in the future. So far at least 15 students have signed up for the project.

Purpose:

The purpose of this project is for the students to learn more about machine learning and AI. A lot of students want to learn or take a part in an interesting project that will help them grow their skills and develop new ones that will help them out in their future careers. So this project will be great for students who want to do that but can't because they don't have the resources or ability to do so through an internship. It will also introduce students to the field and show them how neural networks run and work. Allowing them to expand their own skill set in the process.

Introduction:

The neural network will take a color A as input and predict what color B should the text be that goes on top of the background filled with color A. It will be a simple neural network to build for students.

Design:

We will be using python for development. We chose python because of its simplicity and ease of use. We also found a lot of resources and libraries available online for us to use while we are working on the project. A lot of the tutorials online are written in python, use numpy and other libraries as such. So that is why we are using Python as the choice of language for this

project. We will also use libraries such as numpy and pandas. We might add additional libraries in the future if need arises for that.

Currently we are planning on having a single middle layer for the neural network. We will create a neural network class that will have an array of neurons. We will use numpy arrays for forward and backward propagation. We plan on having a team of people working on different functions. The teams will be around 3 people per function. For the training of the neural network, we will have a team assigned to it as well.

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