

# Vertical Drawing Robot

## ECE 153B Final Project Proposal

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### Overview

We propose to create a vertical drawing robot using the LPC1115 Microprocessor. The robot will attach to flat backboard and hang vertically. The LPC1115 will use an arduino motorshield to drive two stepper motors that will control the robot's pen.

### Peripherals

1. Stepper Motors
2. Arduino Motorshield
3. Window Blind Beaded Cord
4. Pen
5. Flat Surface (particle board)
6. Power Supply
7. 3D Printed Sprockets

### Software Design

There will be two main steps to the software. The first step of the software is the convert the input into a format that can be easily converted to pixel locations so that the robot knows where to draw. The next step is to configure pins to control the stepper motors which in turn control the pen which is connected by the window blind beaded cord.

### Goals

1. Print Circle
2. Print image input if time permits

### Group Responsibilities

Neil is in charge of developing the software that controls the stepper motors. Brandon is in charge of making sure the robot is built properly. We will both be working on making the 3D printed components needed for the robot.