

## **Final Individual Project - Pinball Design Piece OR Kids Toy - Written Proposal Copy**

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**Date:** 3/2/2024

**Class:** ECE484

### **Project Outline**

For this project, I would like to build a randomized blocker for the pinball machine that moves horizontally throughout a part of the board. To accomplish this, I plan on making a conveyor belt system with a geometrical shape attached to the top of the conveyor belt which moves horizontally. Due to our project having a galaxy theme, this object could be a planet or star. I plan on using a motor which has 360 degree rotational capabilities on one side of the conveyor belt to achieve rotational movement. I also plan on implementing randomness in the horizontal movement of this device, as moving it at a constant rate would get boring to the user. On the pinball board, I plan on removing a very thin slit and placing the conveyor belt directly underneath which then attaching something to the conveyor belt will be seen only on the board. To build a conveyor belt, I need two rotational pieces, and a belt. I plan on printing these two rotational pieces and buying the belt on amazon. If time and supplies permit, another conveyer may be added for extra difficulty.

### **Parts List**

- Conveyer Belt
- Two Rotating Cylinders
- Stepper Motor / Continuous Servo Motor
- Object to be placed on the belt
- Arduino (For power/code)
- Voltage Booster (For Possible increased voltage output to make motor move faster)