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Robot Arm Developer Information

TO USE THE SHAPE DETECTING SOFTWARE:

Download the Robot Arm Visual Studio project and build.

Notes:

- This software was only tested on a Fujitsu Lifebook T-Series
- This software only used the internal webcam
- To ensure proper paper detection, avoid shiny surfaces
- To ensure proper paper orientation, place laptop forward and to the left of paper
- This software currently does not include a GUI option to change the COM port, to interface with the arduino, please change the port in the source code

TO USE THE ARDUINO ARM INTERFACE:

Download the arduino repo and upload to an Arduino.

Notes:

- This code was only ran on an Arduino Micro, it may not function on other arduinos
- Be sure your servos operate exactly from 0 to 180 degrees, the code does not have provisions for adjusting this range.
- Be sure to sufficiently power the servos; often the USB power will not be great enough

TO USE THE ARM DESIGN:

Contact me at njanke@ltu.edu for the design

Notes:

- A layer of duct tape needs to be added to the bottom of the electromagnet, else it may retain the shapes even after power is cut
- A metal servo horn is REQUIRED for the shoulder joint; testing has shown plastic servo horns will fail from the inertia of the arm.

If you have any other questions, please contact me at njanke@ltu.edu.