

Conversations in Bloom

Assignment 3 Reflection

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March 12, 2020

Portfolio

<https://sarchwalk.github.io/sarchwalk.portfolio.github.io/tangibles-p3.html>

Reflection

How much time did you spend on the assignment outside of class

50 hours between 2 people

What did you learn?

- There's a tradeoff between friction and power
- Servos need a consistent supply of power and current
- File I/O with Arduino is finicky

What advice would you give future students?

- Prototype early
- Figure out power early
- Trying to avoid low-level I/O ops on Arduino probably isn't worth it
- If you need to connect Arduino and processing, make sure your serial ports match!



Conversations in Bloom

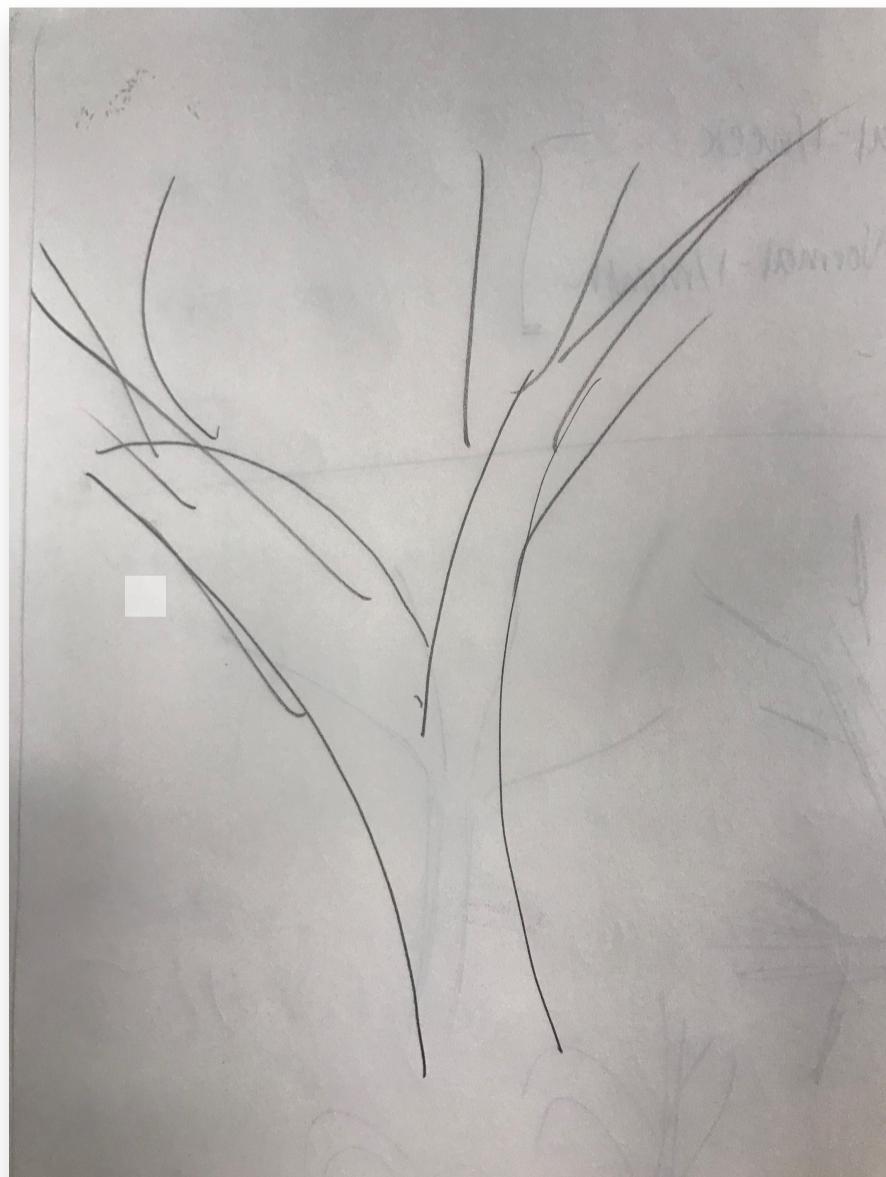
CPSC 599.88 - Physical and Tangible HCI, Project 3

Create an interactive physical visualization - an object whose physical behaviour or dynamic state represents data. The data physicalization should represent personal data.

The Idea

By using a dataset of phone call logs, we wanted to track the frequency of calls with people who are important to us. Our grandparents, parents, and friends are all groups of people who we care deeply about, but we sometimes forget to call. To remind ourselves to reach out to these people more frequently, we decided to represent the 'health' of our relationship with each group.

To physicalize this data, we settled on using a tree with dynamically changing branches to represent the health of our relationship with these groups of people.



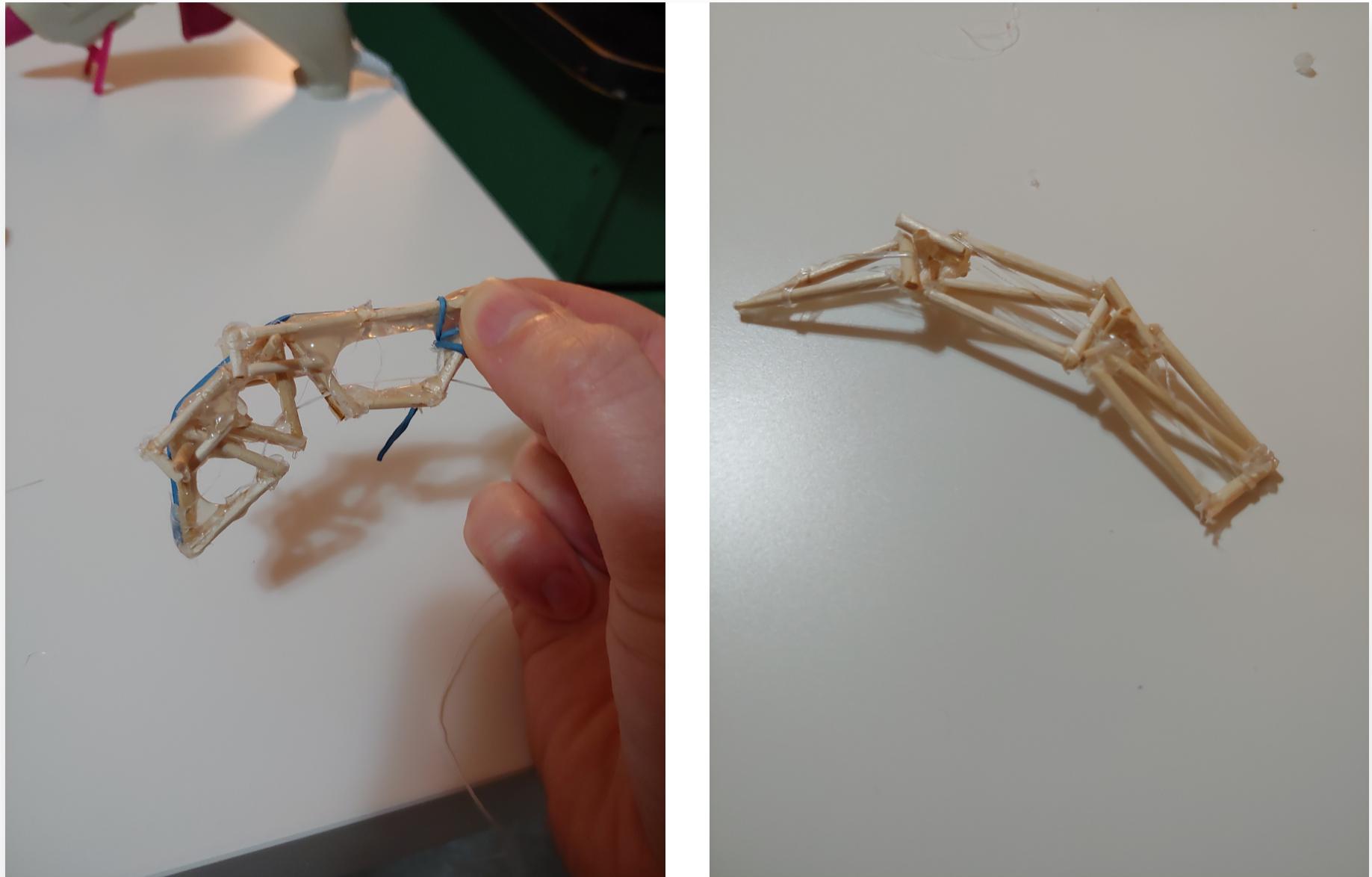
Tree Design:

Our initial idea was to have two branches that would represent the health of our relationship with our parents and grandparents.

Initially we wanted to avoid using too many servos, so this design excluded a representation for the relationship with our friends.

Initial Branch Prototypes

The largest challenge that we faced was building the branch mechanism. Our initial idea was to keep all servos underneath the tree and to use a piece of string tied to the end of the branch to pull it up. Through prototyping, we discovered that this was not easily achievable.

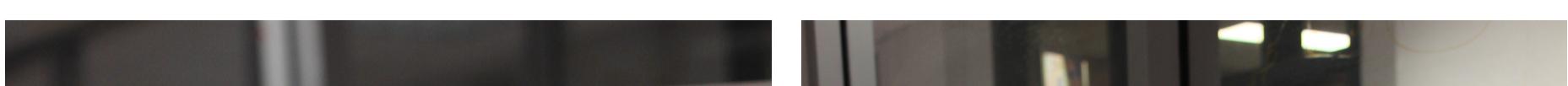


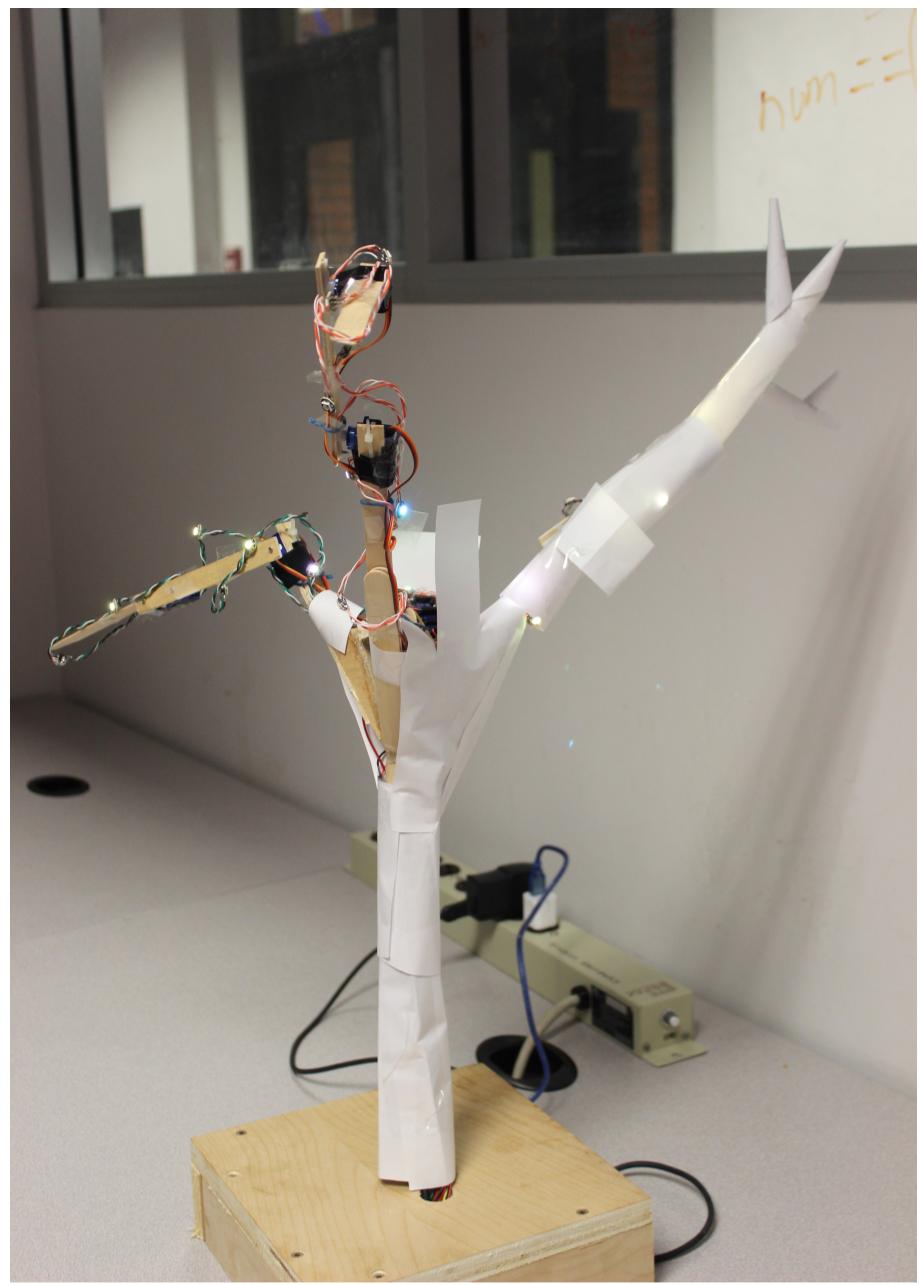
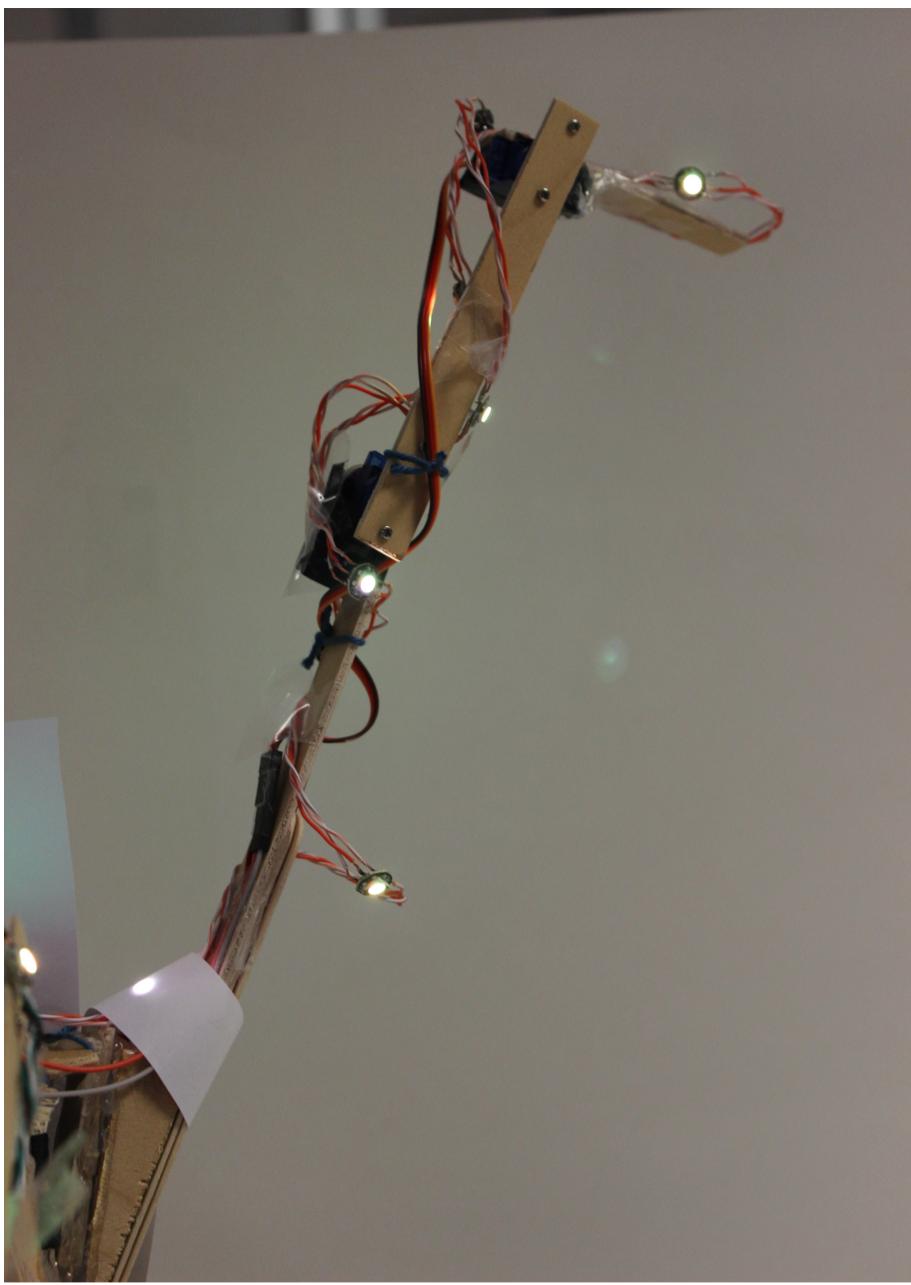
Tangibles P3: Arm Prototype



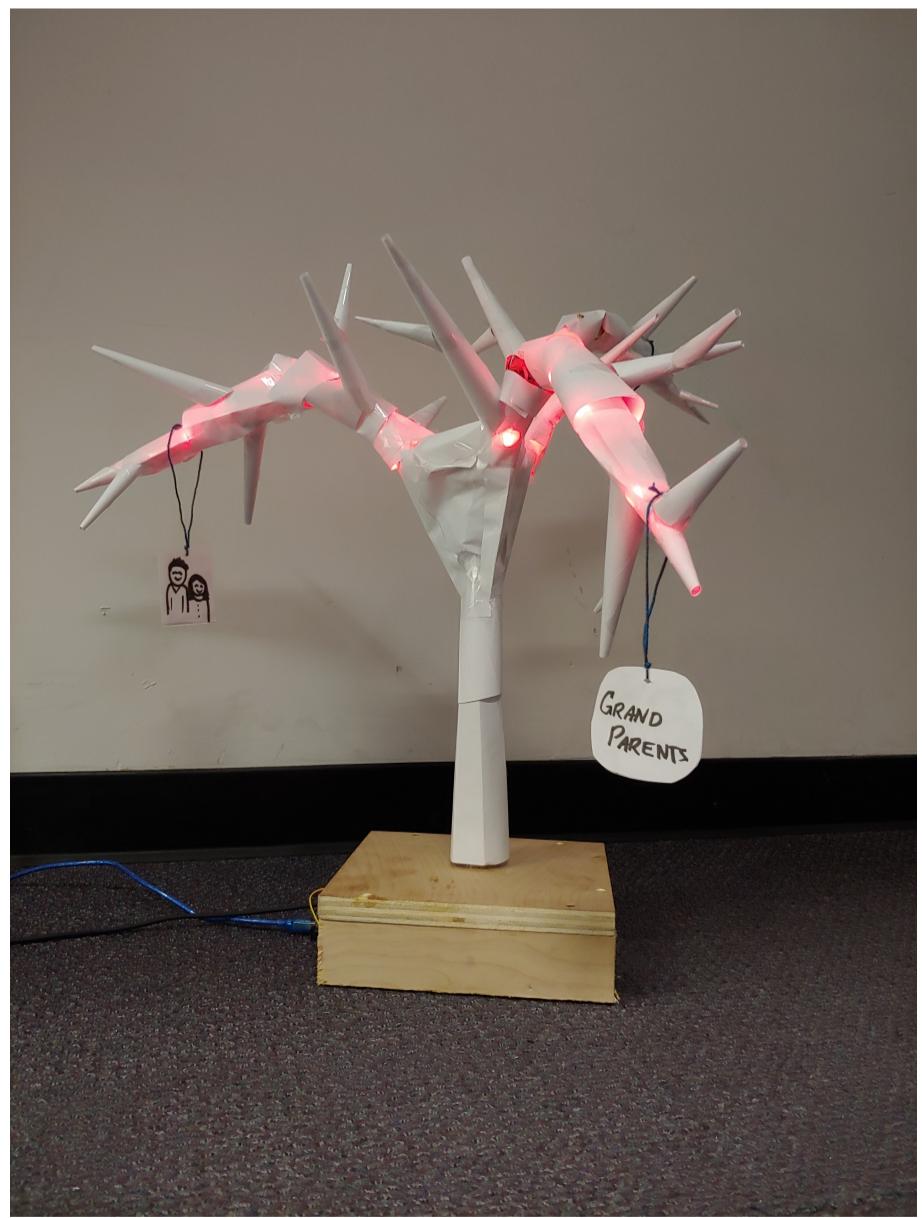
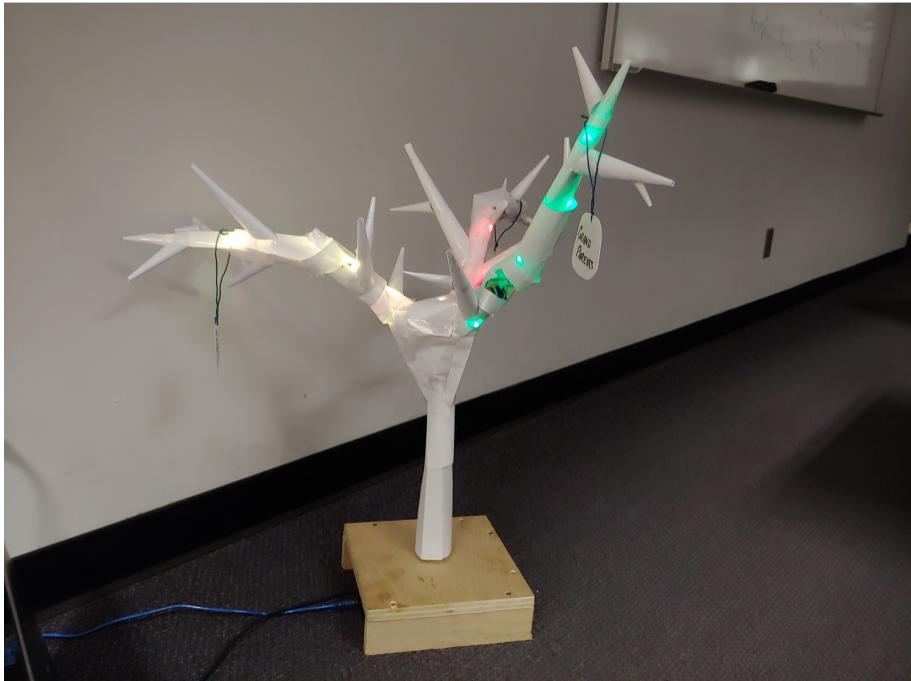
The Result: Conversations in Bloom

The Guts

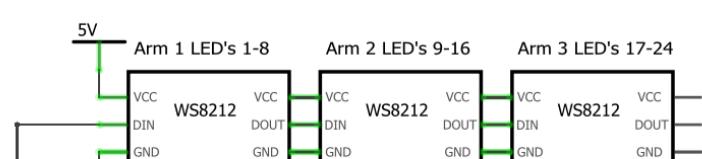


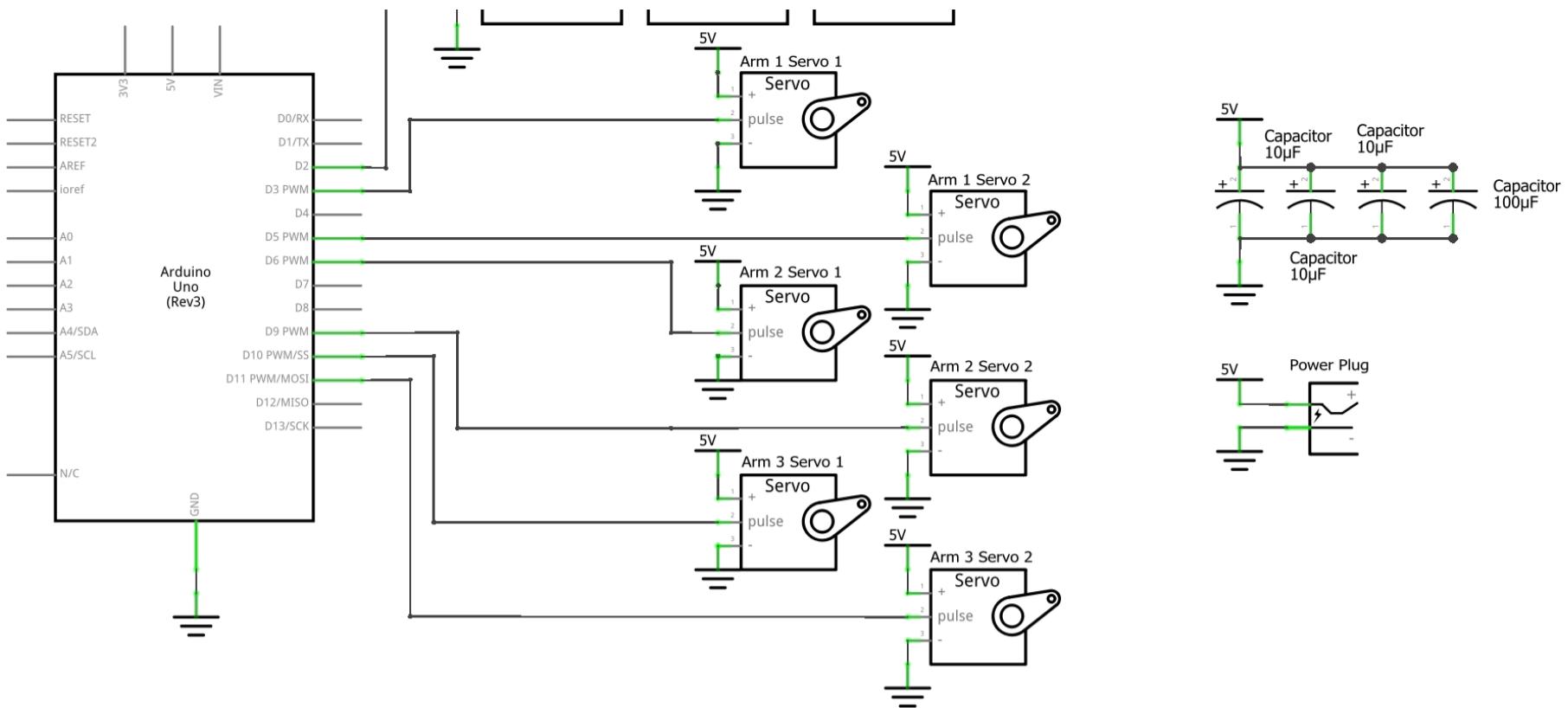


The Glory



Schematic





fritzing

Conversations in Bloom Demo



Source code [here!](#)

Reference Materials:

[Reading from a text file and sending to arduino](#)

[Serial input](#)

[Wiring a servo and capacitor](#)