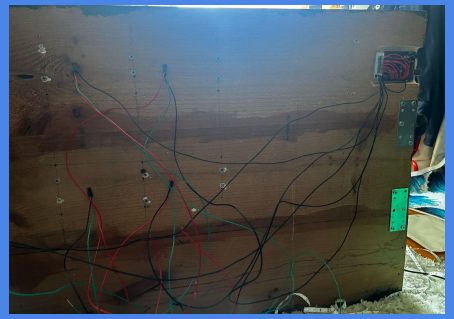
Smart Shelf

Problem:
For one of my first big projects
Ever I tried to address my terrible memory. I had routines, medicine to take at set times and I was trying to get into a skin care routine for my terrible acne, but I could never remember to use the products or even take my meds.

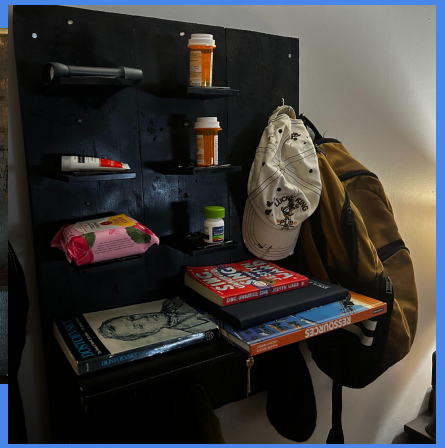
Design:
I had an idea for a shelf with pressure plated rungs which each hold objects, and LEDS which provide visual reminders of when to take meds. I decided to make the shelf itself out of some scrap wood in the garage. I decided to use old particle board for the rungs, and just drill holes through the boards for the LEDS. I designed some cut outs for pegboard hooks and a bottom big rung for other items. I don't have the drawings anymore.
I designed the plates
Around little pieces
Of school folder's
I'd cut and folded
Over with 2 sides of
Aluminum foil to make contacts.



Build Process: I used flat brackets to keep the wood planks together. Cut them on my dad's old miter saw and attached them together. I cut the particle board rungs on the same saw, and spray painted every showing face black. I routed out a little pocket for an Arduino Uno. I don't own a router, so I used a drill with a little piece of wood around the bit that I cut to size to keep the drill from going too deep.







Results/Retrospective:
The shelf has been a nice addition to my life, although I stopped keeping up with updating the code for new routines when college application season started. I will be making it easier to do so.