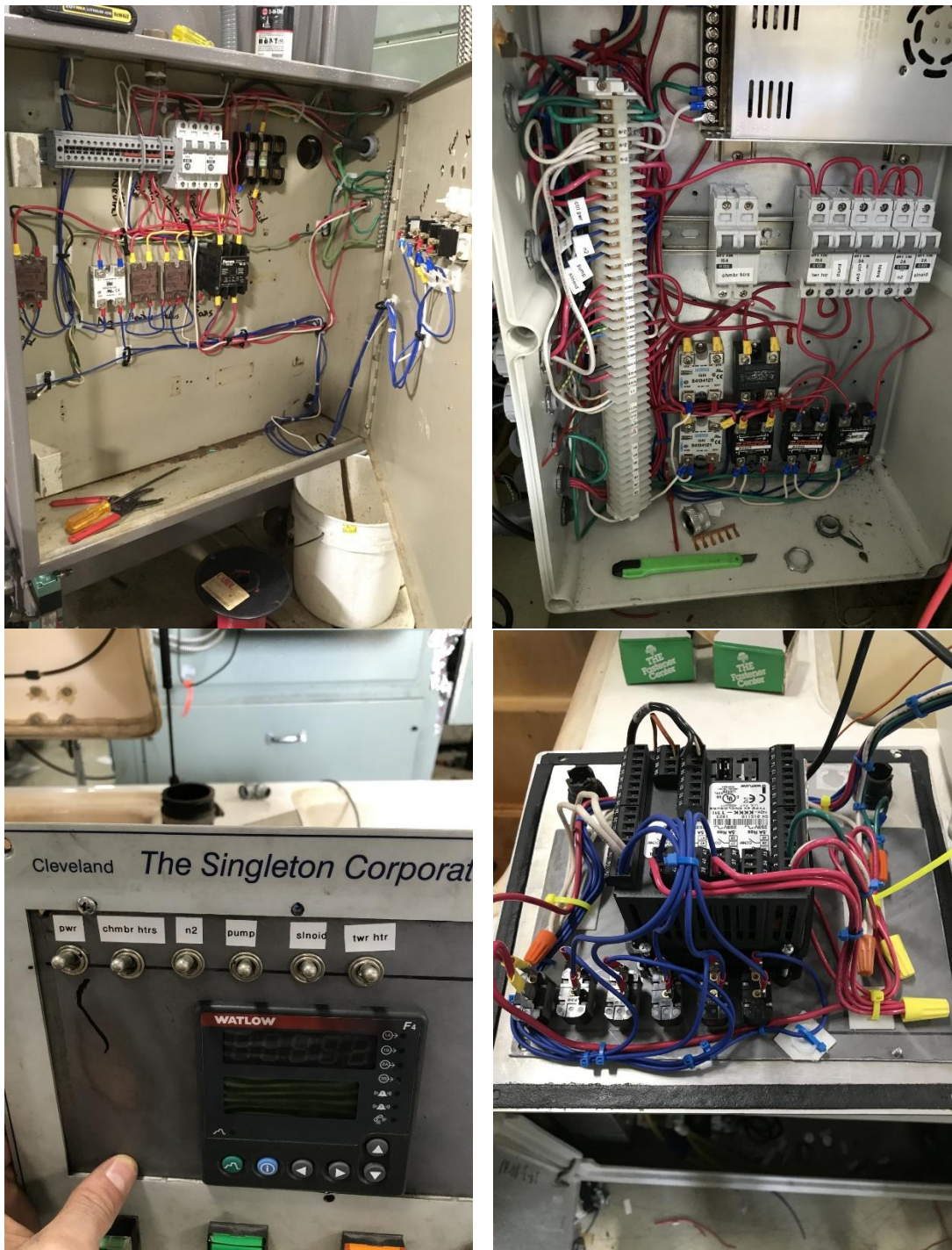# Work photos

Touchstone Systems & Services

Above photos are some of my gutting and upgrading controls for environmental chambers.
Top left is a two-chamber hot, cold and humidity chamber (one of the first controls projects I took on). 2-4 are for a CASS chamber,

Photos 1-3 are a "temporary" setup for an ash analysis test. Photo 4 is a selfie, taken just prior to starting a flammability test.
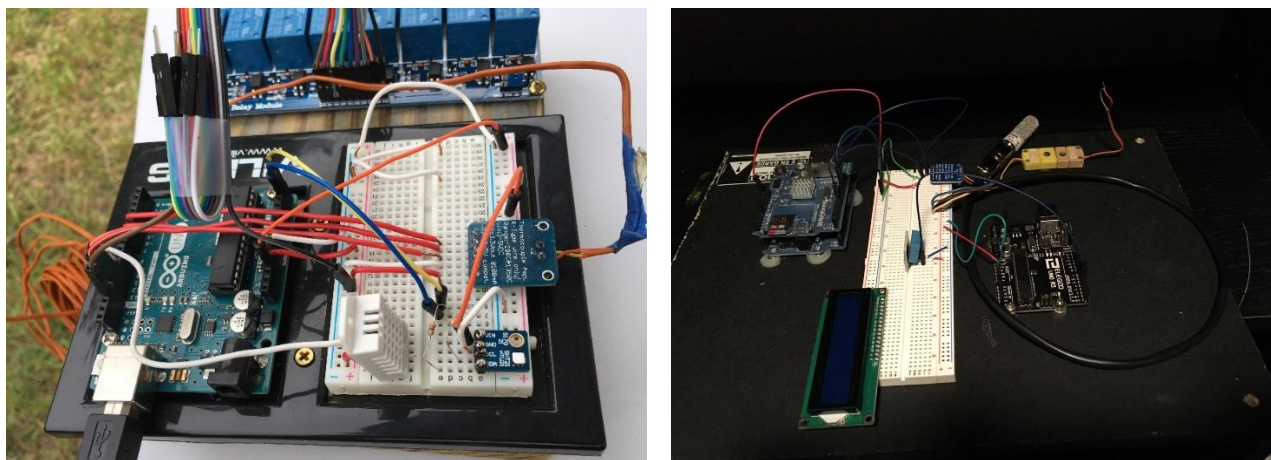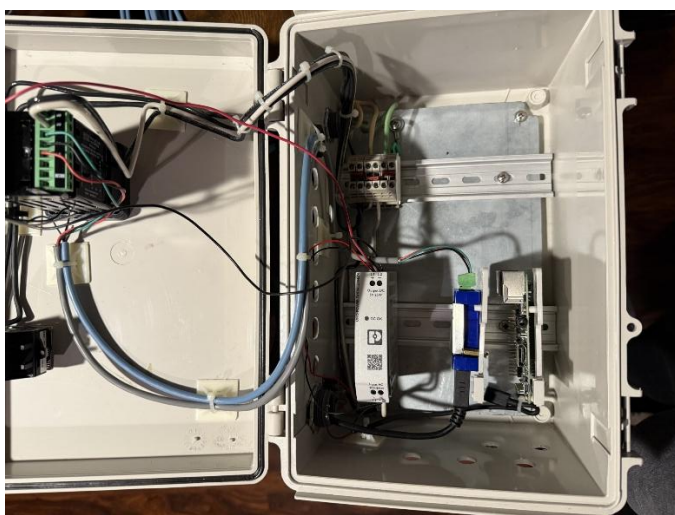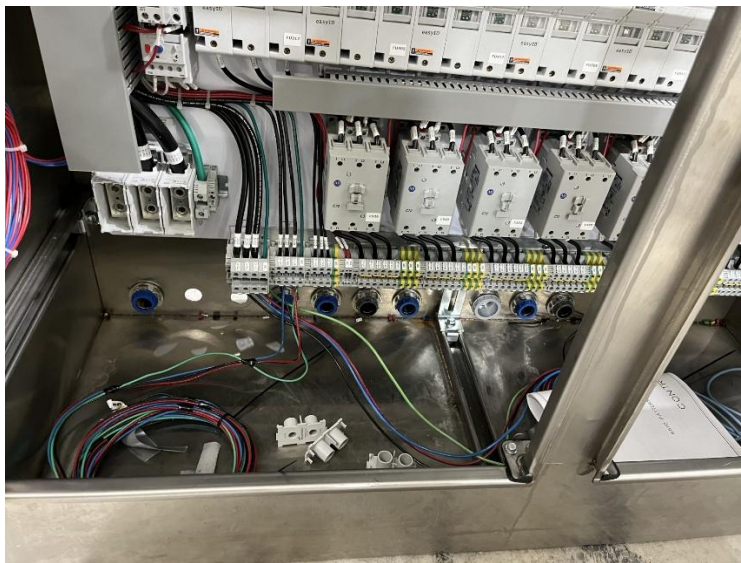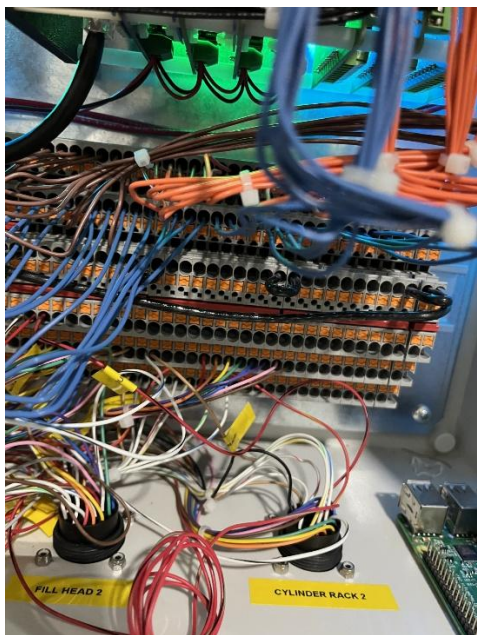
Figure 1: hardware I assembled for a simple environmental chamber program (Arduino).
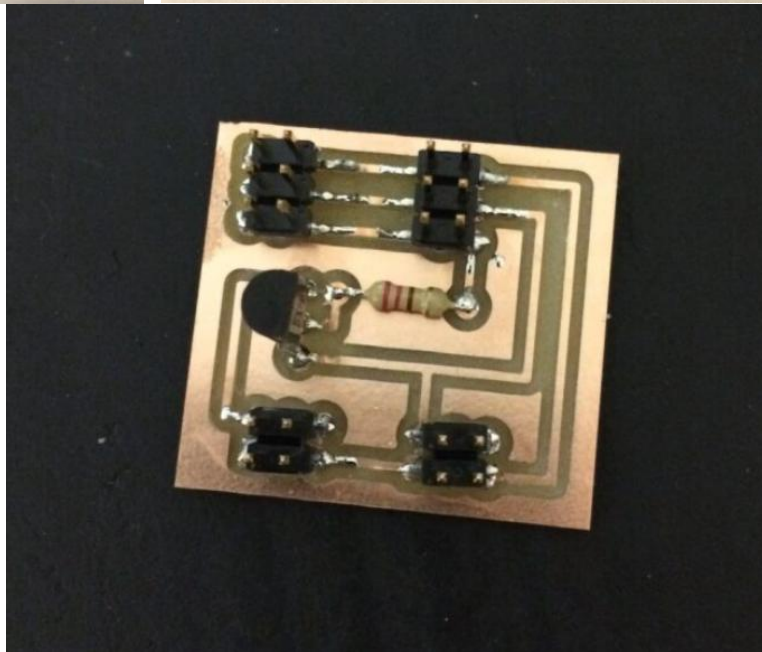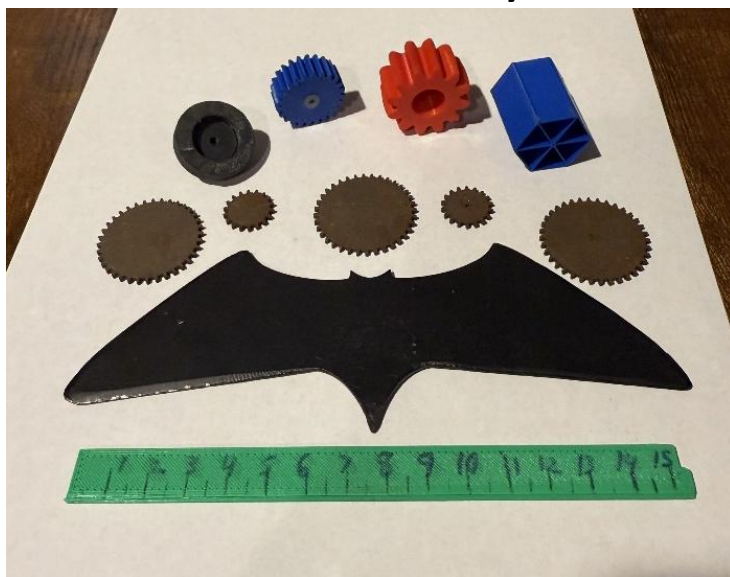
Function of Beauty

Photos 1 & 2: examples of circuitry I would troubleshoot (up to 480V).
Photo 3: SCADA control panel prototype, built (mostly) with scraps around the shop. After this proof of concept earned project approval, I designed a "real" panel and built 8 of them.

Navy, Fabrication Laboratory

The only artifacts I have from the lab. I designed these in CAD, either 123D Design or SOLIDWORKS.

The bearing I made out of spite. While brainstorming how to make nice things with a low budget, I had an idea to use BBs as cheap bearing balls and everyone in the lab said it could never work, so I spent a day or two on this to prove them wrong. By the time I left, they were being used as a standard part of the basic course to show students how to use 3D printers and CAD programs. When filled with BBs, the two pieces snap together and stay in place via tensegrity. You have to pull almost hard enough to hurt your fingers, but not quite hard enough to need a tool (perfect for a learning environment). If I'm being honest, it turned out much better than I expected it to.

I did design and print some items to replace actual parts in the Navy. Among them I remember replicating a pendant controller box and replicating/redesigning an 8 blade iris diaphragm gripping tool used by Navy electricians for amphenol wiring. These were among the very first few official job requests submitted to the lab.
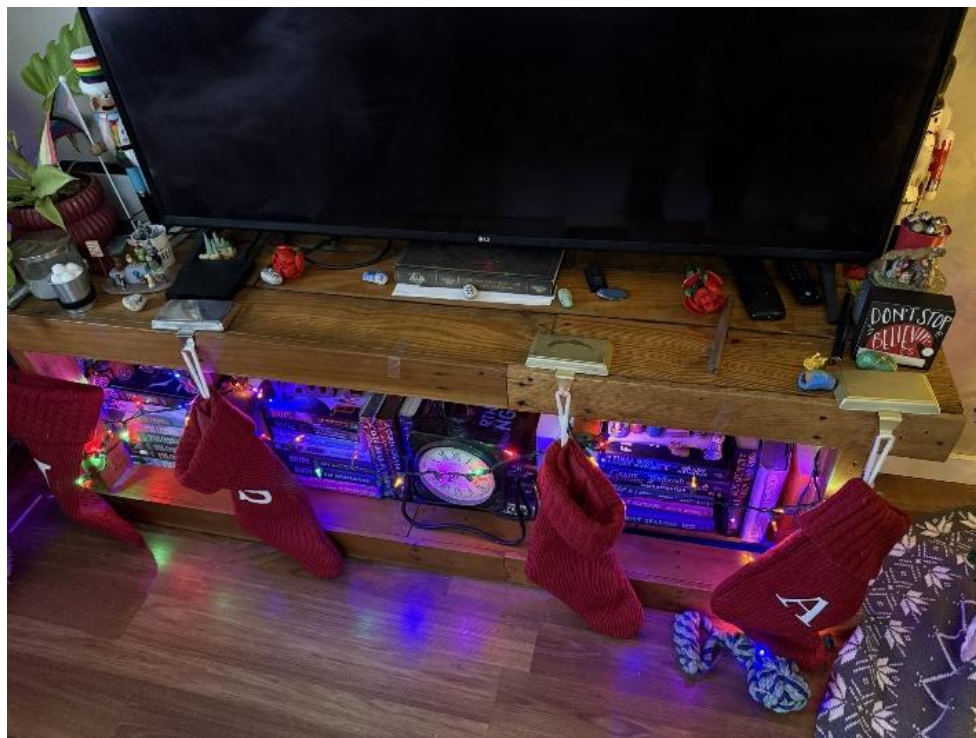
Home projects
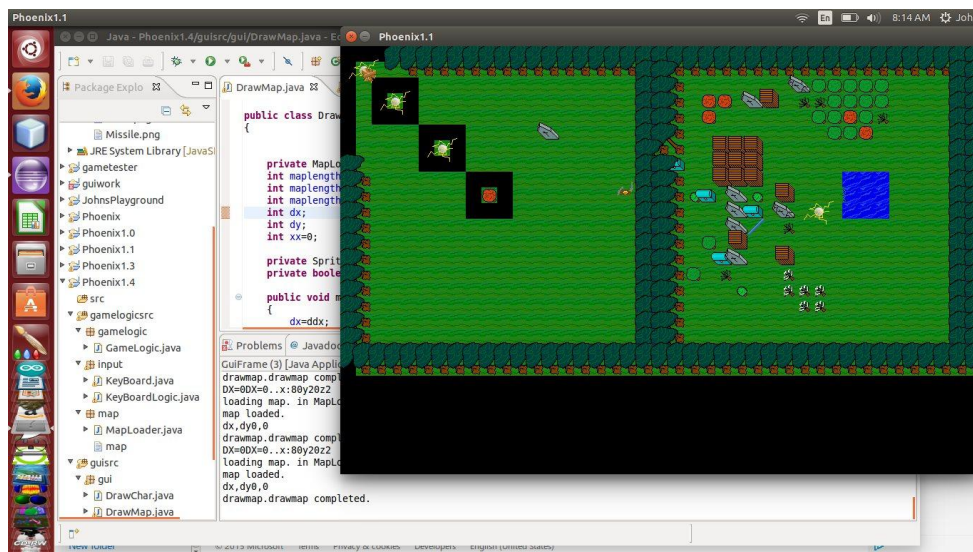
Game Code in action

Self-made sprites for game (crude, just made in MS Paint to have something to work with while writing the code).

First woodworking project, a crude table.

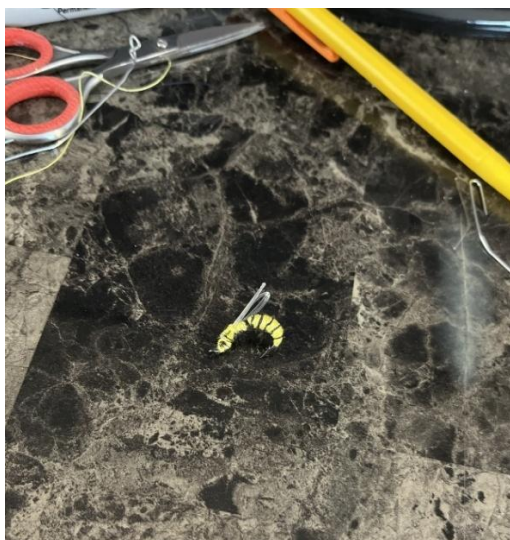6 ft long TV stand made of pallet wood.
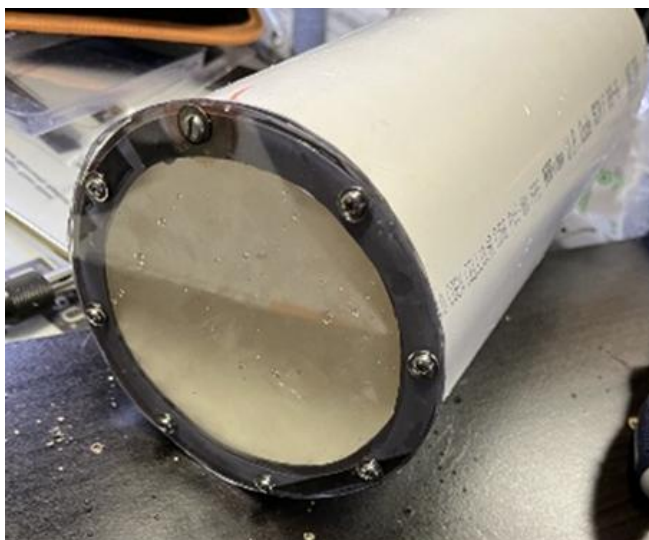
Canoe for daughter's school project.

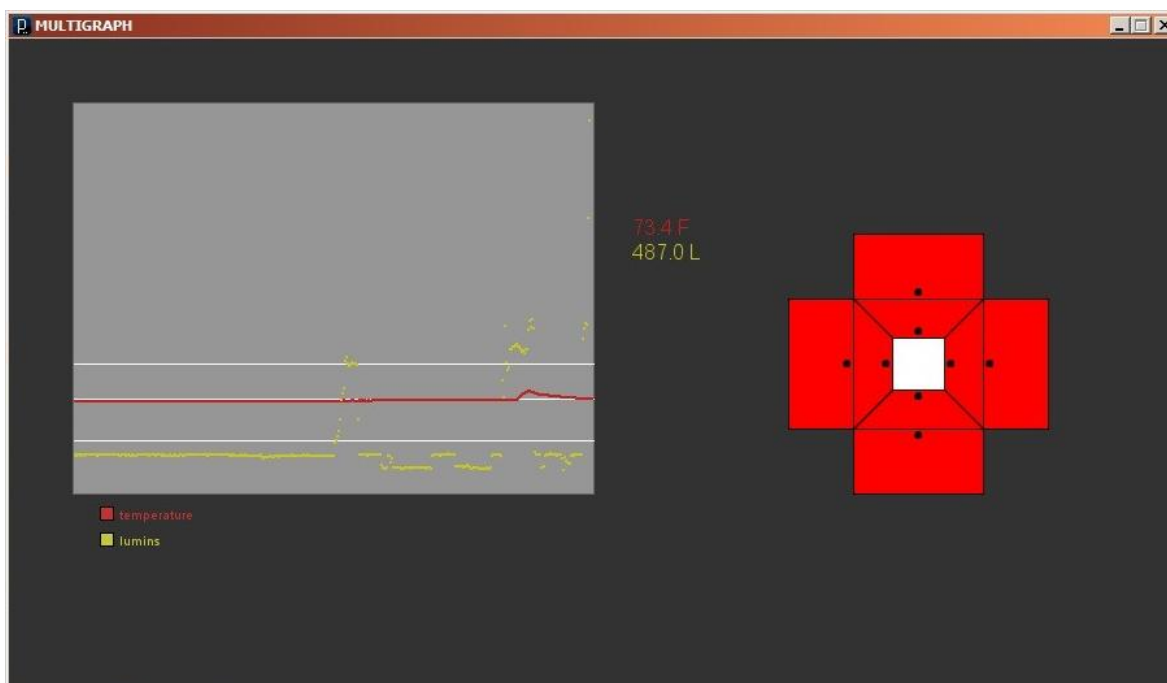One of 4 night stands built with pallet wood.

Replaced fence around my backyard. This portion was a temporary setup until I could cut down a tree that was on the property line.

Trying my hand at DIY fly fishing lures without the recommended tools.

A component for one of my engines.

A fully functioning SCADA program I wrote on an Arduino for a friend to help them control laser temperature for a project of theirs. The graph displayed real time luminosity and temperature, alarms would go off and the graphic would change colors if temperature got too hot or cold. The final version allowed heaters, coolers, and the laser to be activated by clicking a button.
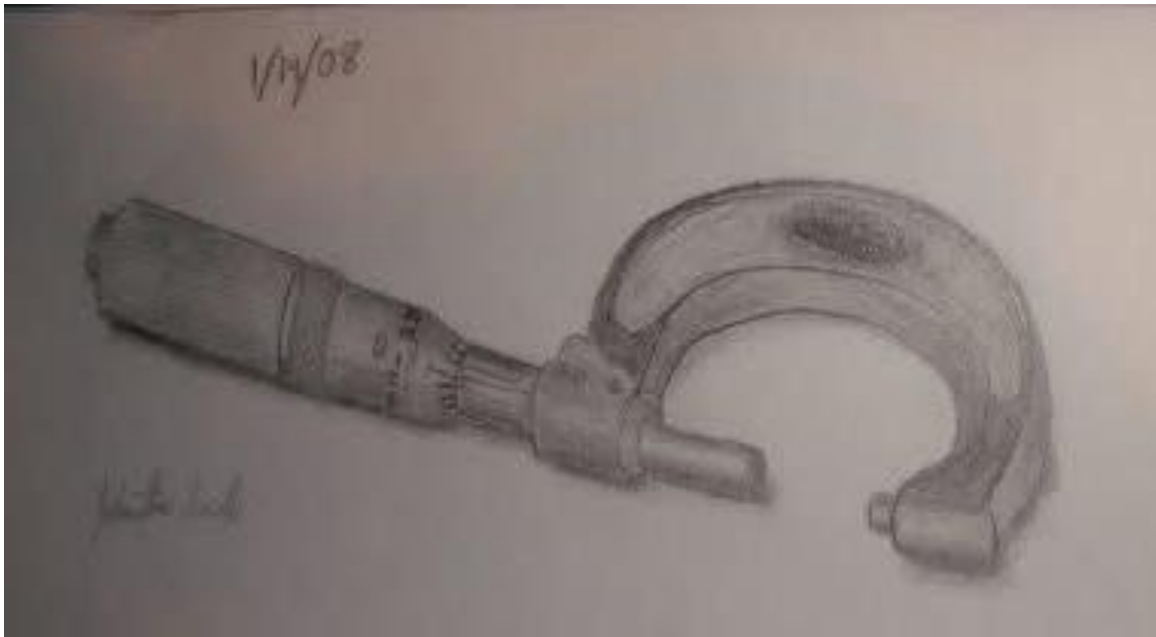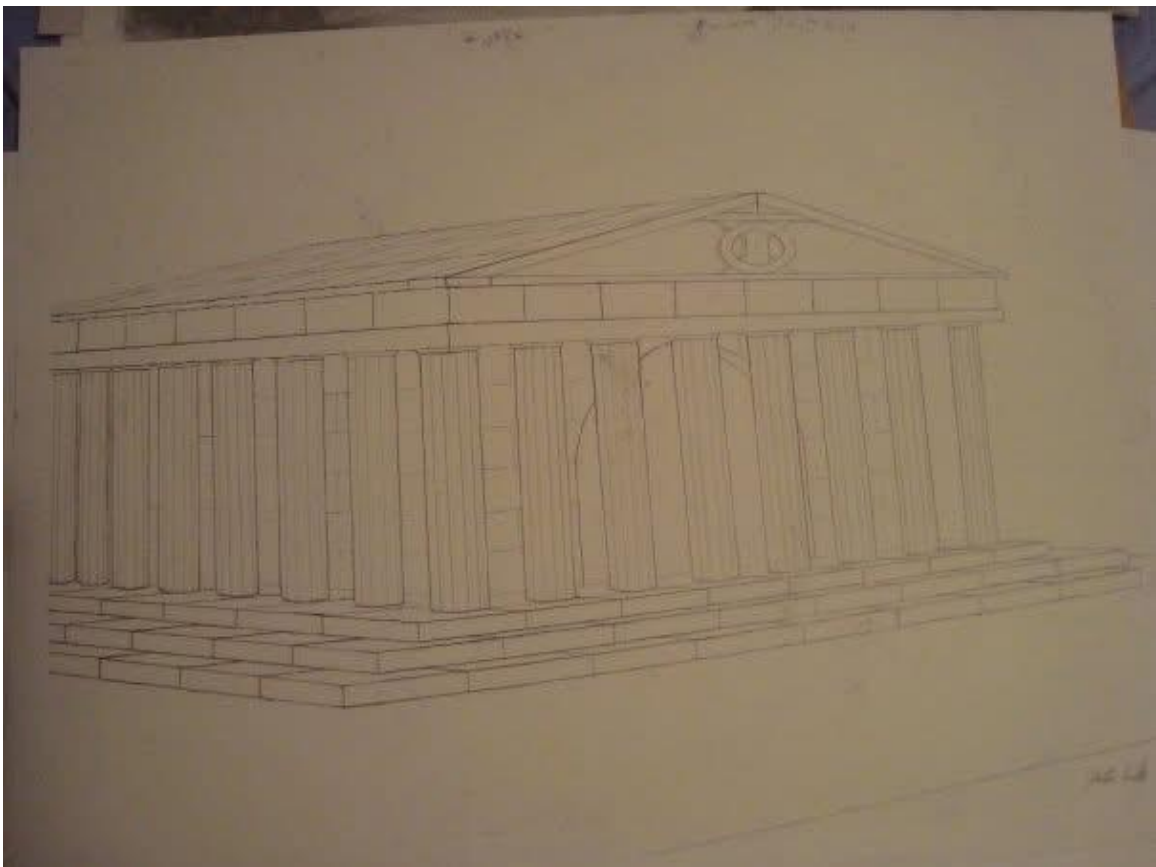
Art

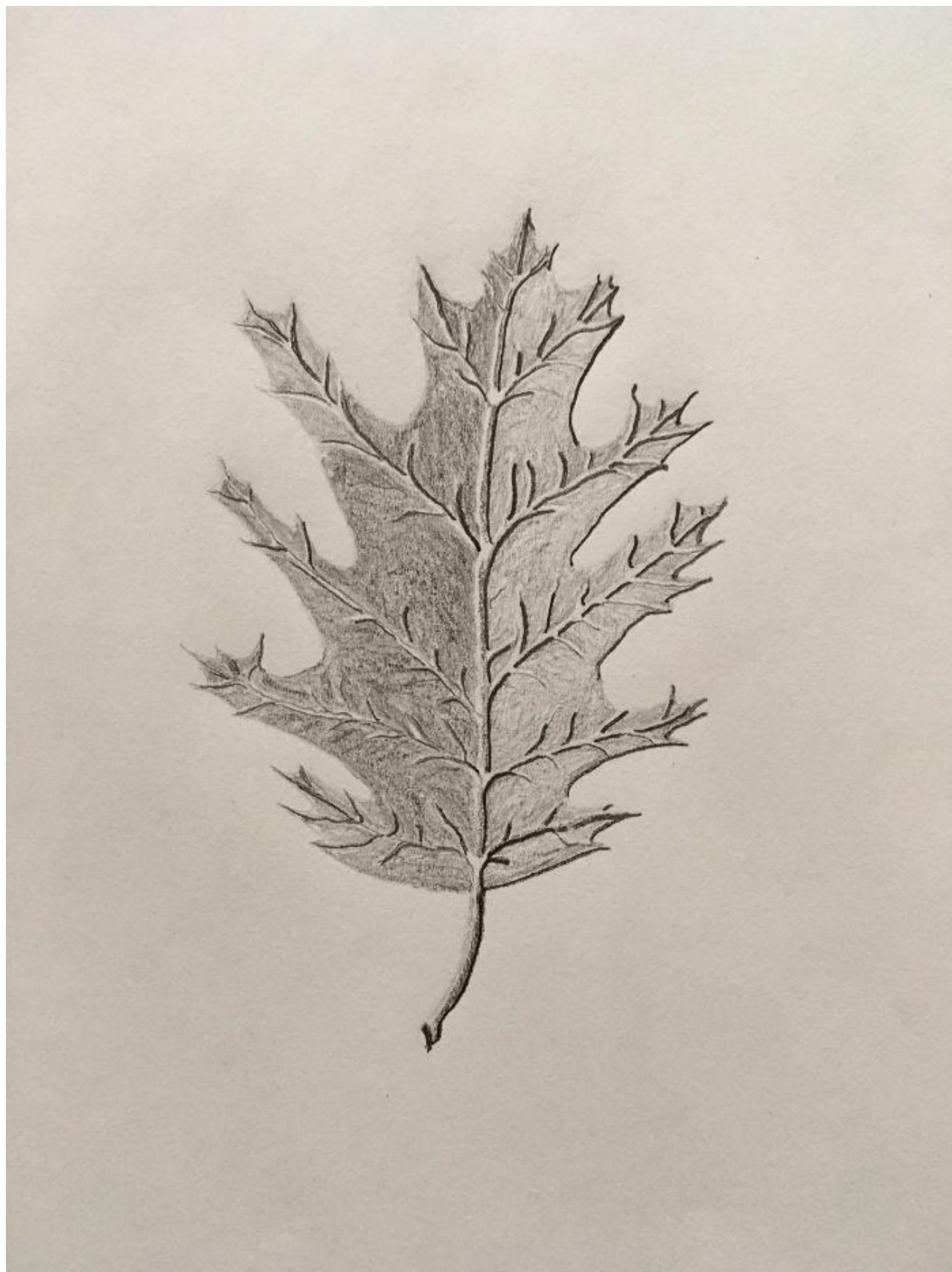Practicing on graphic design using vectors

Clay sculpture: A crow's wing.

First serious attempt at drawing something.

Rendering in 3 point perspective.

Oak leaf, gift to a kind neighbor.

4 leaf clover, parting gift to a friend on leaving the Navy.

Final project in a college art class. It was selected by the professor to be displayed in the hallway. Apologies for the low image quality, it was taken over 20 years ago when I didn't have a good camera.

Legos with kids and painting some figurines with them.