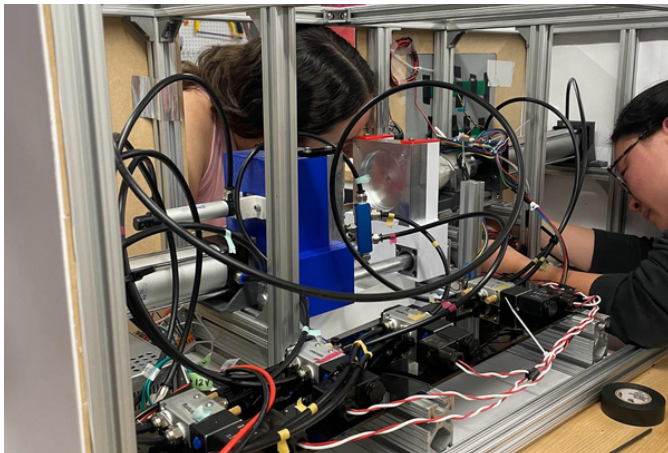
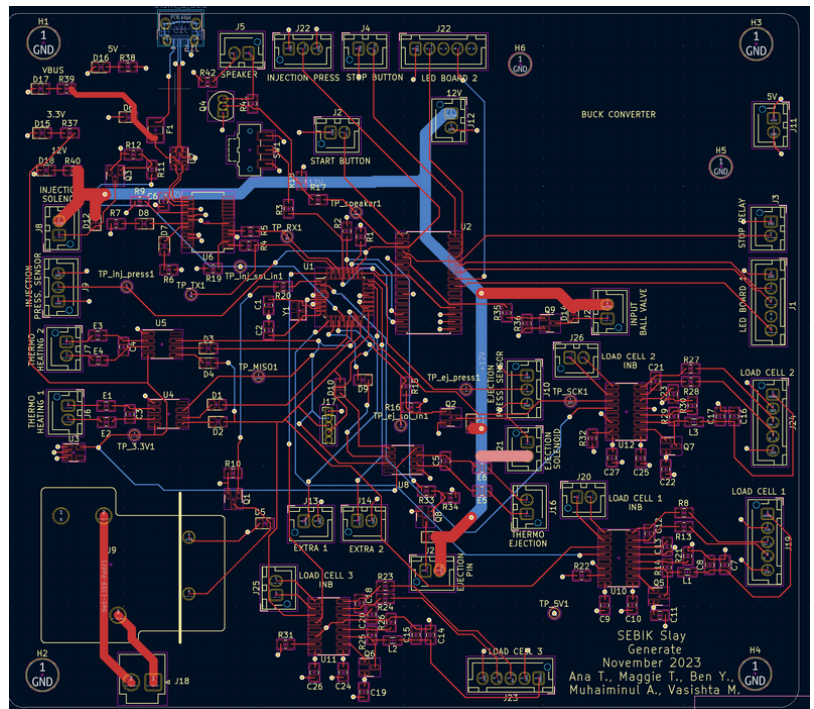
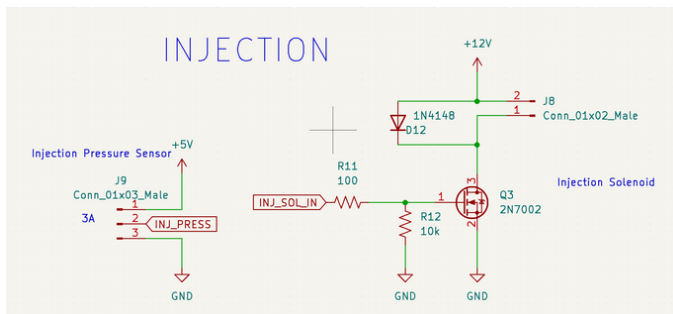
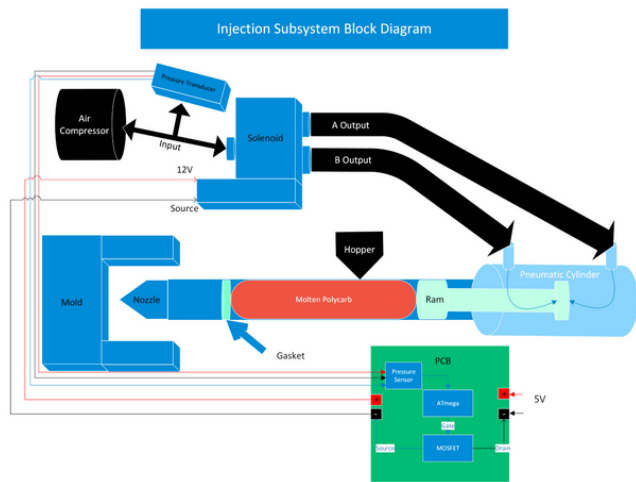


## AUTOMATED TABLE TOP INJECTION MOLDER (SEBIK)



### What?

- Developed an automated table top injection molder seeking to provide a solution to medical supply shortages by rapidly producing common medical products on demand

### How?

- Designed circuitry and **PCBA** for the injection ram subsystem using **KiCAD**
- Soldered** components and wired peripherals on PCB
- Developed state machines and identified fault points in embedded code design using **C++** and **Git**
- Conducted **DFMEA** on injection ram subsystem to identify, quantify, and reduce design risks

### Results

- The design fulfilled its purpose by allowing 10.45 grams of molten polypropylene to be injected every 4 minutes via pneumatic cylinders