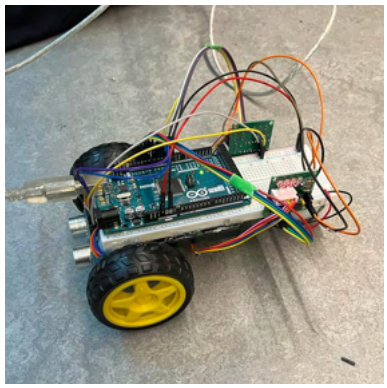
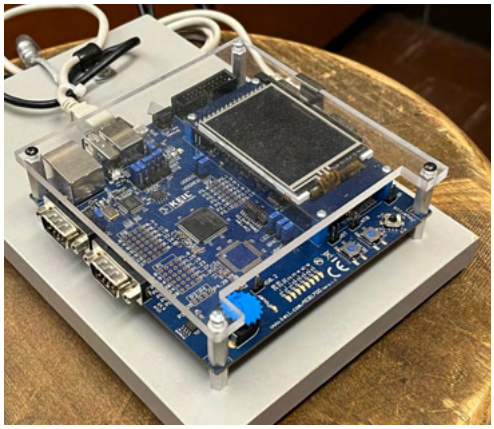
Water Sensing Robot

- Designed and built a two-wheel differential drive robot.
- Built using Arduino platform, stepper motors, TDS (water sensor), and ultrasonic sensors.
- C++ firmware algorithm sweeps and senses water reservoirs.





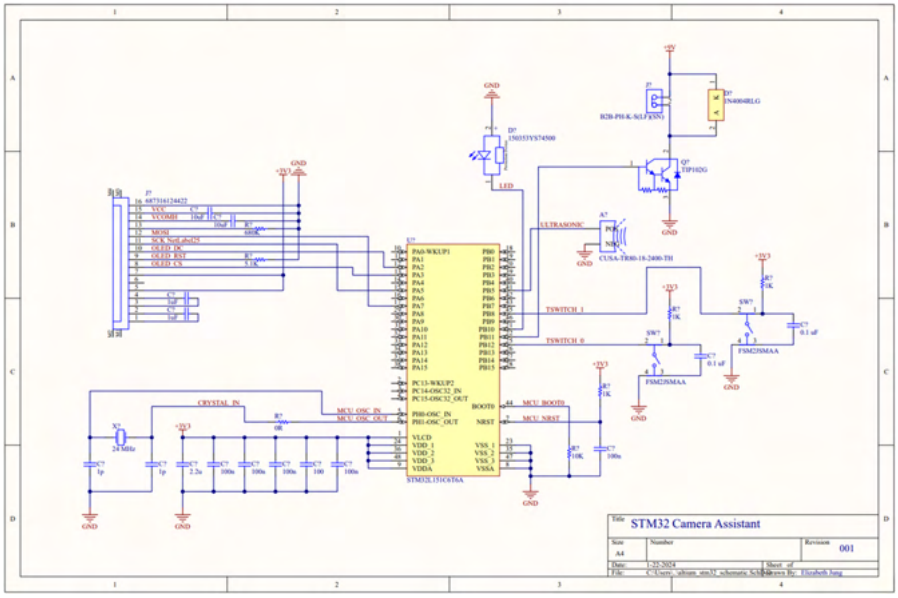
Real-Time Operating System

- Designed a functional RTOS from scratch in C and assembly on an LPC1768 ARM Cortex M3 Microcontroller.
- Implemented scheduling, multi-threading, and mutexes.

In Progress:

Film Camera Self-Timer PCB

- STM32L151C6T6A used.
- Schematic designed in Altium.
- Mechanism will incorporate a self-timer feature using a solenoid linear actuator to press the shutter button.
- An ultrasonic sensors photoresistor, and SPI LCD screen will be used to suggest focal distance, ISO, and brightness settings.



Acrylic & Watercolour Studies

Elizabeth Jung-Torres Portfolio