

CSE 123A - Week 2 Status

Group 8

This week, we focused on transition from initial setup into planning the project. We reviewed and refined our overall project timeline to better align the task and goals across the remaining weeks. We also began looking at potential hardware components by identify key parts and comparing possible options using a decision table.

Timeline

The team finalized a detailed timeline outlining goals from initial decisions through prototyping and testing. This timeline establishes clear goals for part selection, hardware/software development, and end-to-end testing, providing a structured plan to complete the project within the remaining weeks. By having these goals early on, we have a clear expectation for what we need to deliver and reduce the chances of falling behind during the build and testing phase.

Decision Table

We came up with a few ideas for what hardware we could use. For the microcontroller, we decided on using the esp32 because we are familiar with it from CSE121. Our main discussion was on what sensor we should use to measure the water level in the container. We have the following sensors to decide from: ultrasonic, load cell/weight, laser, camera, and non-contact strip sensor. For the server, we decided on a basic HTTP server for now; there are also other options we could use, like AWS and Vercel. After discussing these resources, we identified some challenges such as wifi connectivity/signal in the fridge, size constraints, contact vs no-contact sensors, and what power source to use (battery, usb, etc).

Todo Next Week

In the next week, we plan to finalize our contribution tools using a local LaTeX compiler with the GitLab separated files. Once everyone has switched over, we will delete the older version. We also plan to research possible sensors for our initial and stretch goals, along with ordering them from BELS and downloading the documentation for the sensors. We will also create the decision table, using the details above, so that we can make a final decision during our Monday meeting with the TA.

Project Decisions

We have selected GitLab as our project location. We will be using \LaTeX documents in the shared repository to keep track of documentation, research, and work completed. We have also decided that our issues tracking manager of choice is in GitLab using their issues board. We have set it up to include starting issues and basic project function goals like research tasks. Our repository with all of these things is linked here: <https://git.ucsc.edu/pnauwela/123a-project/-/tree/d3ba4457ead67f81f786f53da5bf10631144b1ea/>