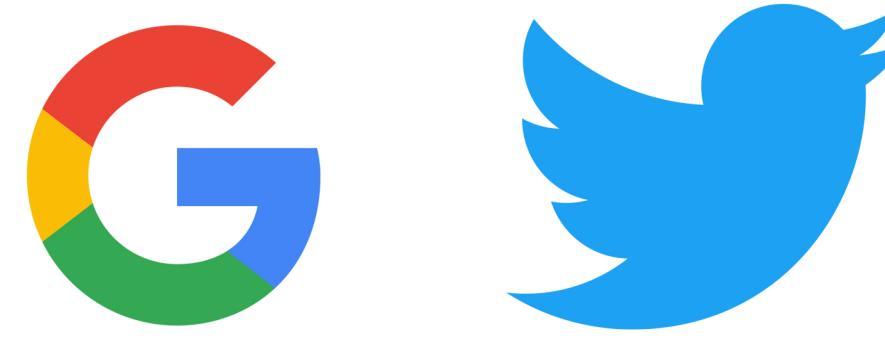


Internet of Things (IoT) Information Display



Benjamin Daszkiewicz & Jacob Nading

Advised by: Dr. Malinowski

Concept

- Touch interaction
- Internet connectivity
- Professor's office hours via Google Calendar
- Class announcements via Twitter
- Advertisements
- Weather conditions

Components

Hardware

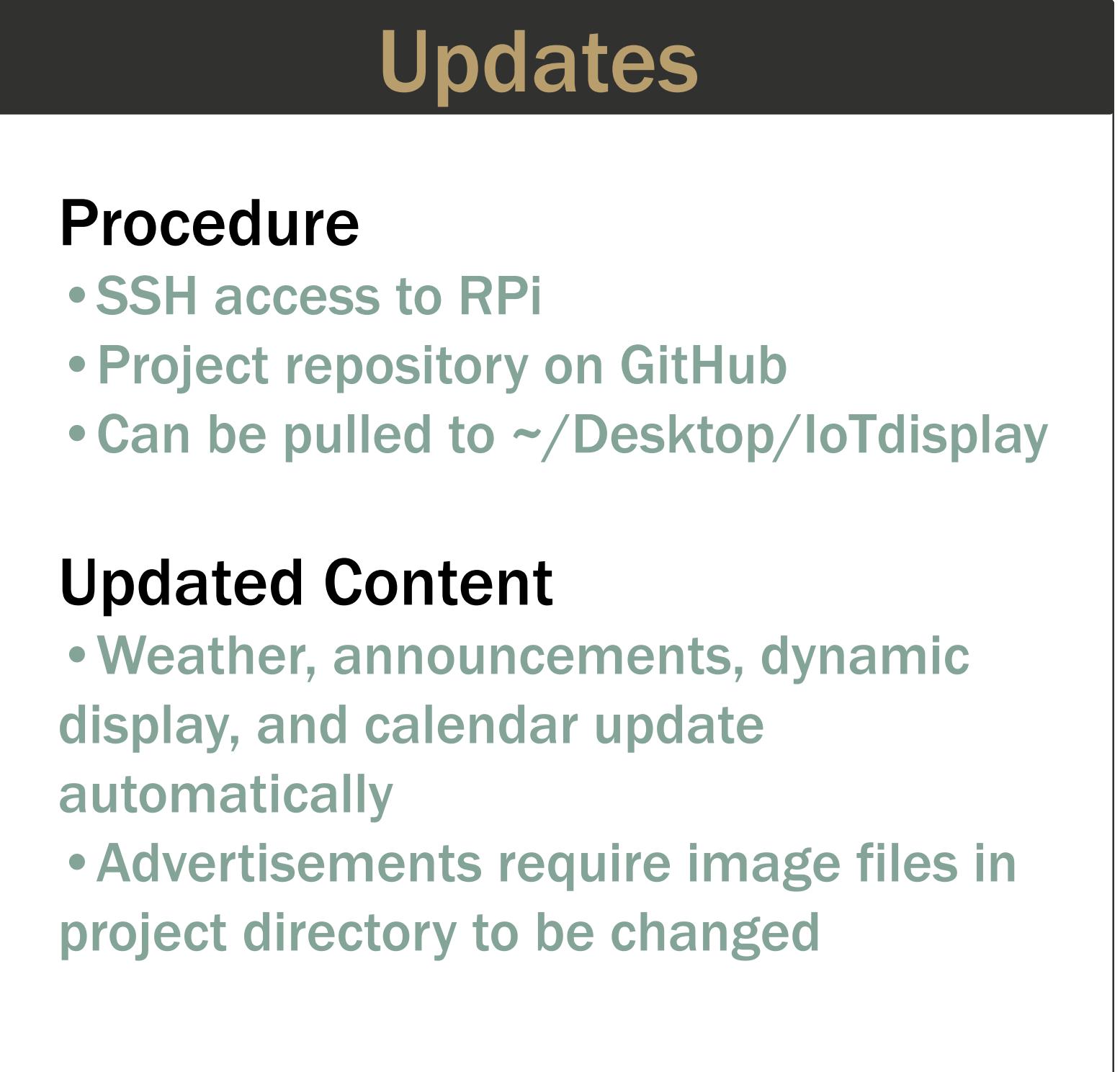
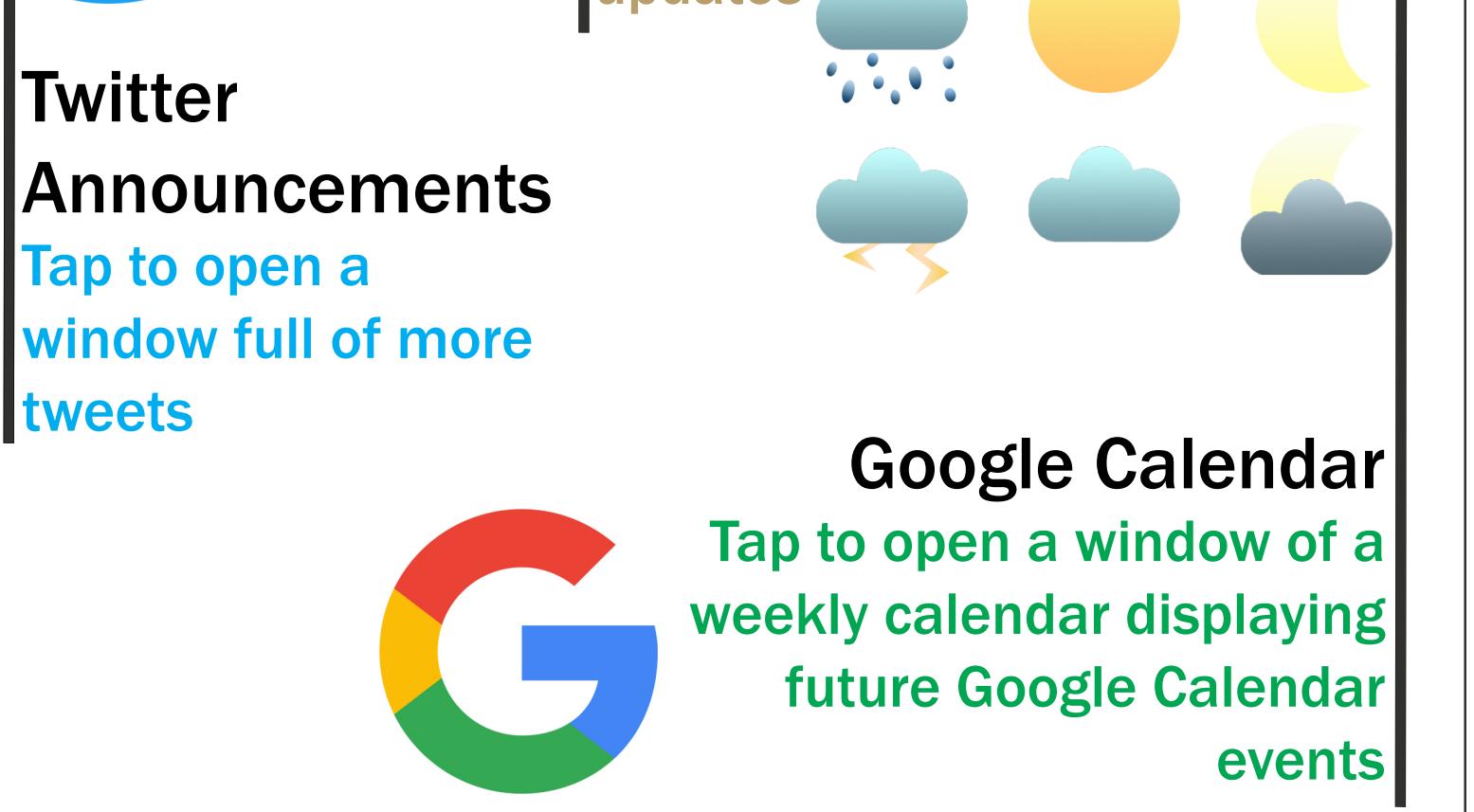
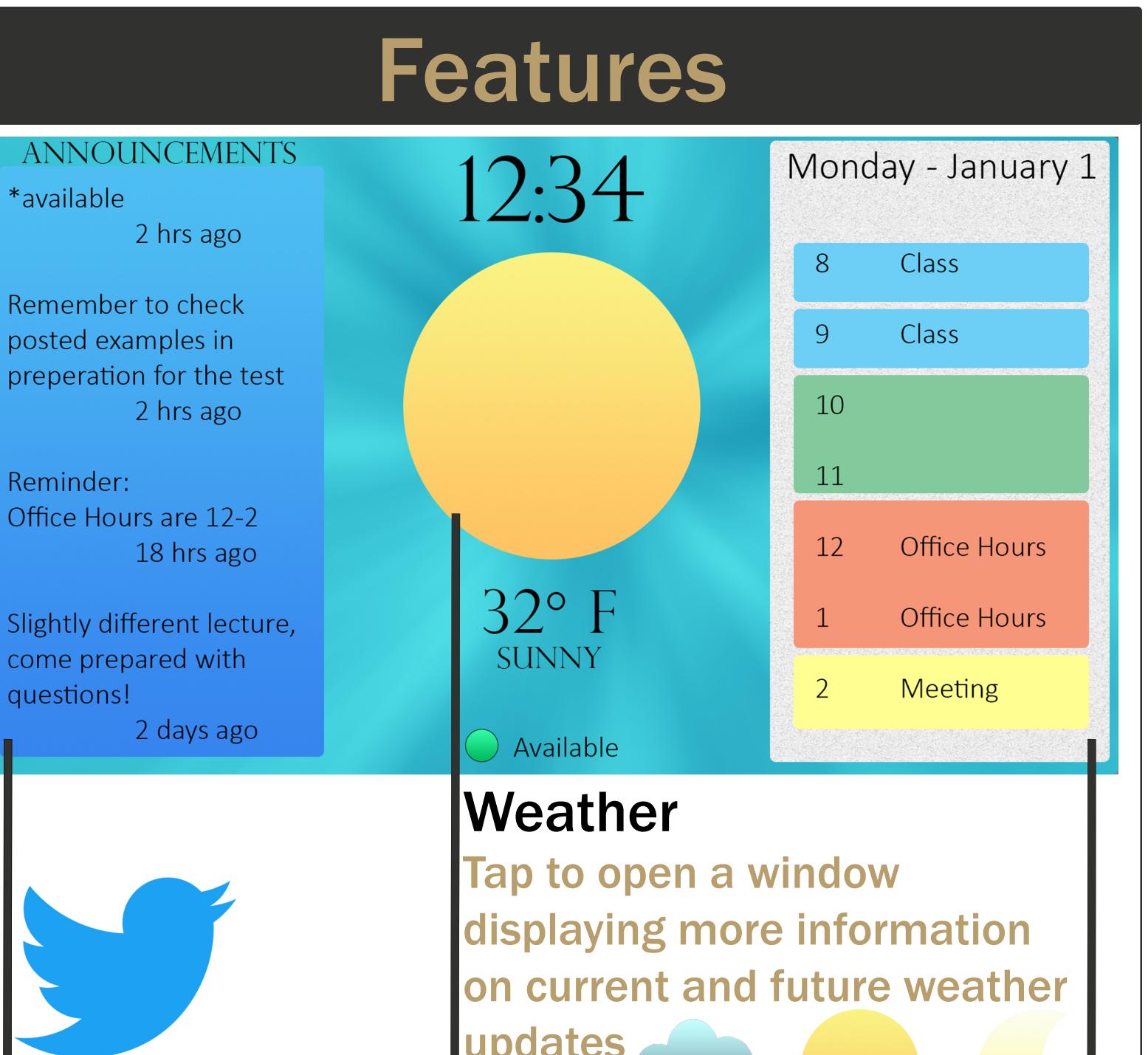
- Raspberry Pi model 3B
- 13" multi-touch LCD monitor

Software

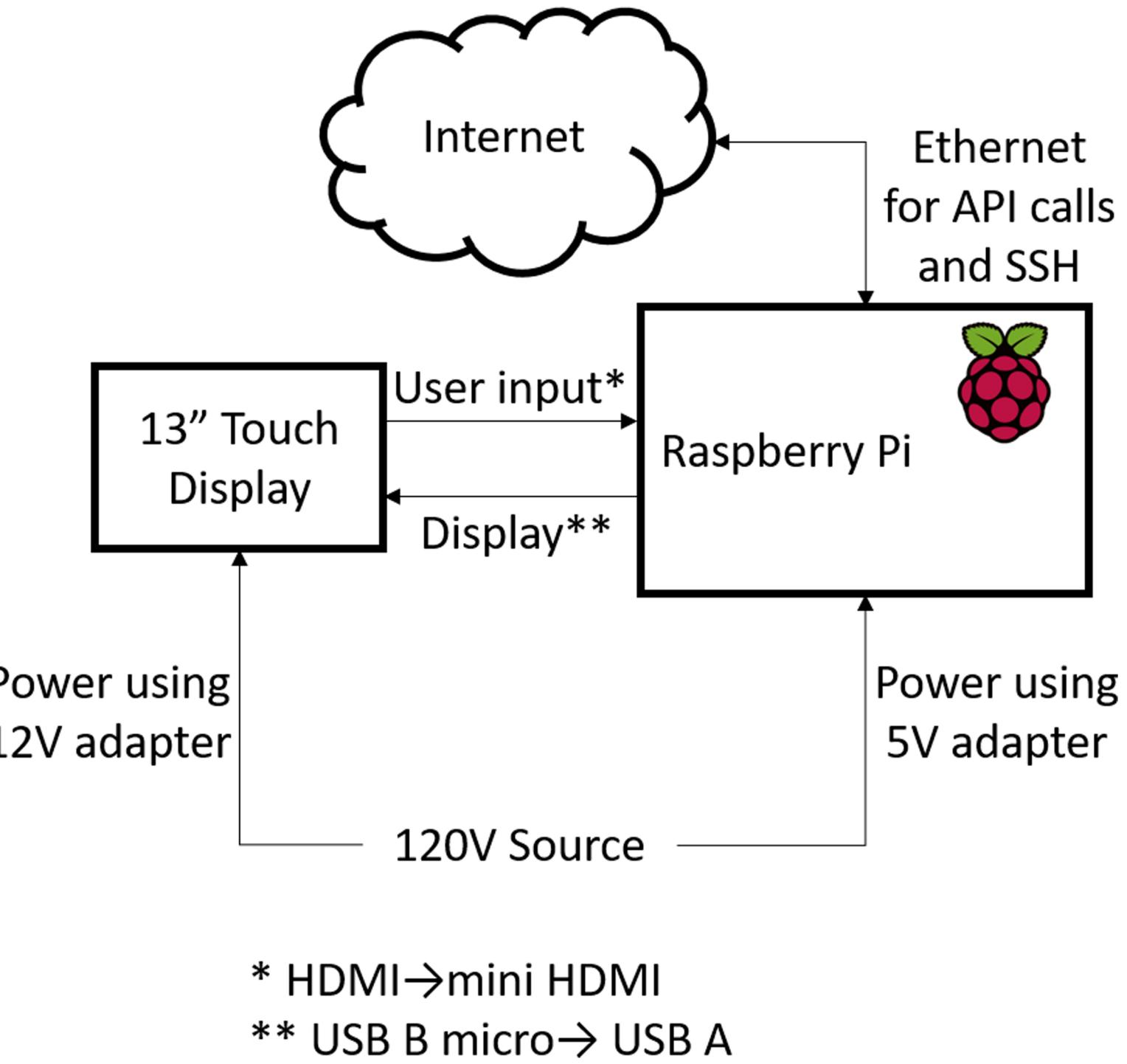
- Debian Rasbian Stretch OS
- Python 3.6
- appJar and Tk GUI module
- Google calendar API
- Twitter API
- OpenWeatherMap.org API
- Sunrise-Sunset.org API

Project Management

- GitHub version control
- Trello
- MS OneNote project notes

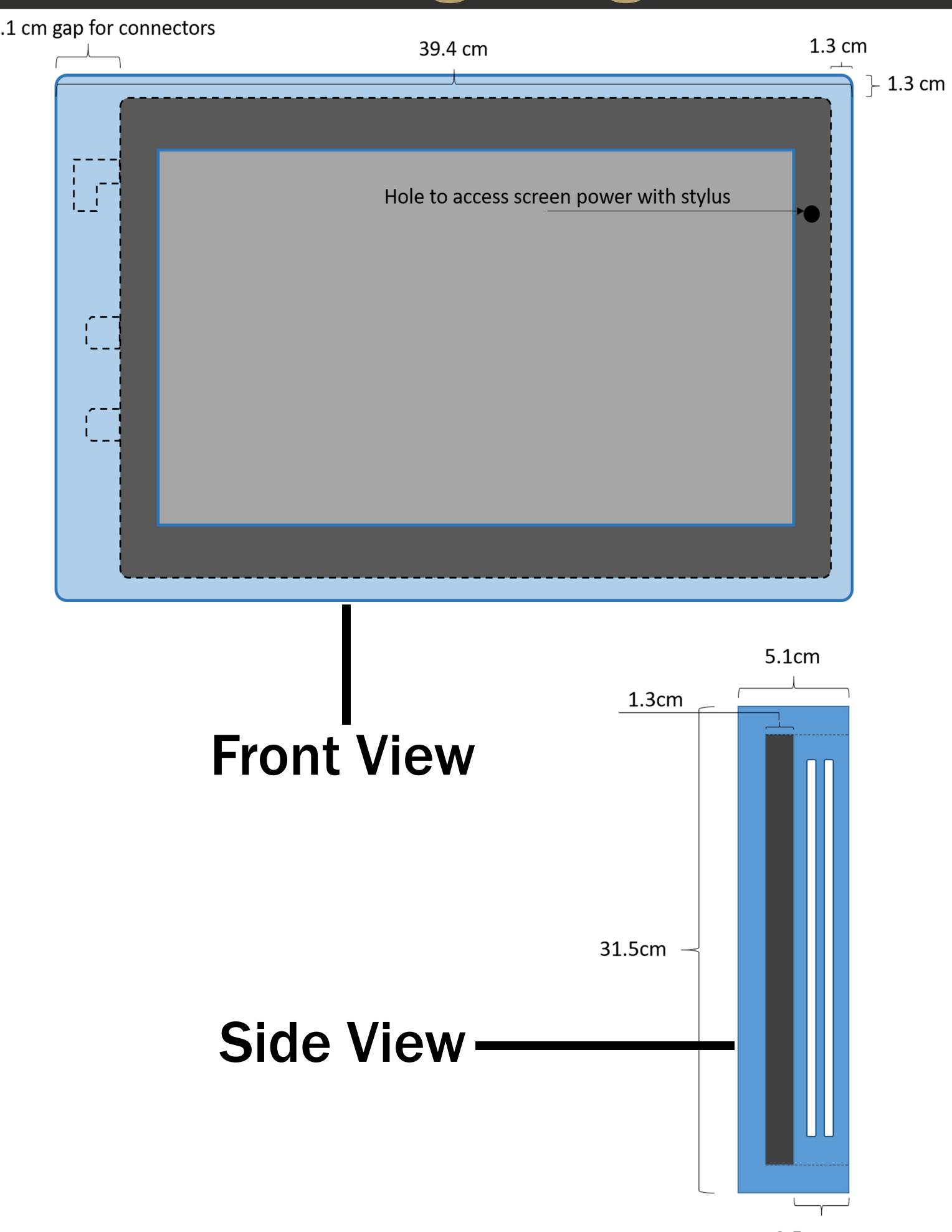


System Level Diagram



* HDMI→mini HDMI
** USB B micro→USB A

Mounting Diagram



Event-Driven

Why event-driven threads?

- Advertisement Changes
- Timeouts

appJar thread handling

- .registerEvent(function)
- .setPollTime(milliseconds)
- .thread(function)
- .queueFunction(function)

GUI Process Diagram

