*Project title:*
***An Exploration of Turing Pi Based Edge Cloud***

*Client &/Advisor:*
***Dr. Akhilesh Tyagi***

*Team Members/Role:*
***Owen Perrin – Hardware developer***
***Nick Bergan – Hardware developer***
***Andrew Phelps – Software Developer***
***Cooper Caruso – Software Developer***
***Owen Henning – Software Developer***
***Kale Kester - Software Developer***

## Weekly Summary

The goal for this past reporting period was—first and foremost—to get everyone up to speed on the plan for this semester. For the software-side of things, we initialized a Django project within our repository where code can be written, issues can be referenced, etc. For the hardware, we wanted to establish a system and environment in which everyone can access the computer modules and cluster as a whole.

## Past week accomplishments

Our accomplishments are separated per group member:

- Andrew Phelps: Explored docker desktop environment and experimented with Seaweedfs. Got docker installed and operational on my local device, and was successful in creating and running a Seaweedfs container.
- Nick Bergan: Got a duplicate Pi 4 setup in preparation to work on the cluster.
- Owen Henning: Began Implementation of Video.js
- Kale Kester: Scheduled meetings and gathered group logistical data, basic git upkeep
- Cooper Caruso: Seaweedfs does work well for our project it was very straighforward to upload/download files so should be straightforward to implement in our project. Django was set up successfully should be easy to add a good amount of features to the backend. Very customizable for our needs so it fits well in project.
- Owen Perrin: Contacted ETG regarding getting static IPs for the compute modules and mainboard. Then, reimaged the modules, configured settings, and recorded information about their network interfaces.

## Pending issues

o Andrew Phelps: N/A

o Nick Bergan: N/A

o Owen Henning: N/A

o Kale Kester: N/A

o Cooper Caruso: N/A

o Owen Perrin: The board management controller on the Turing Pi 2 mainboard generates a dynamic IP each time the device restarts for firmware versions 0.1.X. Updating the firmware is necessary to change this to be static (which is necessary to assign it a static IP on the campus network).

## Individual contributions

| NAME | Individual Contributions<br>*(Quick list of contributions. This should be short.)* | Hours this Period | HOURS cumulative |
|---|---|---|---|
| Andrew Phelps | Set up docker on local machine, worked with SeaweedFS in docker environment. | 5 | 5 |
| Nick Bergan | Experimented with Docker containers and distributed file systems on a separate Linux system. | 3 | 3 |
| Owen Henning | Updated git board began video implementation | 4 | 4 |
| Kale Kester | Scheduled meetings and gathered group logistical data, basic git upkeep | 4 | 4 |
| Cooper Caruso | Set up backend using django rest framework, experimented with seaweedfs in order to learn more about functionality | 8 | 8 |
| Owen Perrin | Freshly re-imaged compute modules; getting MAC addresses for static network location. | 4 | 4 |

## Plans for the upcoming week

- Kale Kester: Set up and explore frontend options (probably nodejs), learn and understand interactivity between frontend and django rest framework
- Andrew Phelps: Continue investigations into docker, look into docker image creation and create a basic image for django.
- Owen Henning: Continue implementing Video.js
- Owen Perrin: Update BMC firmware and setup cluster on campus
- Cooper Caruso: Finish the backend by adding all the tables and setting up handlers for HTTP requests
- Nick Bergan: Access the Turing Pi remotely on campus and continue learning the FS API.

## Summary of weekly advisor meeting

We met with our advisor and simply recapped our progress since last semester. Then, we went into further detail about requirements and group roles. With everyone on the same page, we listed immediate goals which were to be done for this report period.