

## EE/CprE/SE 492 BIWEEKLY REPORT 2

sdmay24-03

10 February 2023 - 24 February 2024

### ***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**

This week, we continued laying the foundation for future sprints. We want to ensure our dev loop is very tight—iterations should be fast in order for us to meet our requirements. For example, we've spent most of our time getting both the hardware and software platform integrated with our Gitlab as well as making sure everyone has access to the tools and platform.

### **Past week accomplishments**

Our accomplishments are separated per group member:

- Andrew Phelps: Created a test docker image for our project. Started on ci/cd pipeline.
- Nick Bergan:
- Owen Henning: Continued video implementation
- Kale Kester: Set up basic nodejs page, figuring out interactivity with django fs
- Cooper Caruso: Worked on setting up a database that can be connected to django
- Owen Perrin: Put cluster in Sr. Design lab, began work on Kubernetes Gitlab integration

### **Pending issues**

- Andrew Phelps: Need to sort out issues with docker image (it doesn't work perfectly). Need to ensure project main branch is clean and contains the files necessary for pipeline and docker image.
- Nick Bergan: N/A
- Owen Henning: N/A

- Kale Kester: N/A
- Cooper Caruso: Find a database that can connect to django and be contained in a docker image
- Owen Perrin: Need to finish setup of cluster in Sr. Design lab.

### Individual contributions

<u>NAME</u>	<u>Individual Contributions</u> <i>(Quick list of contributions. This should be short.)</i>	<u>Hours this Period</u>	<u>HOURS cumulative</u>
Andrew Phelps	Created a test docker image for our project. Started on ci/cd pipeline.	6	11
Nick Bergan	Continued experimenting locally with docker and seaweedfs in preparation to work remotely on the cluster	4	7
Owen Henning	Continued video implementation	4	8
Kale Kester	Set up node js, figuring out interactivity with software	6	10
Cooper Caruso	Worked on setting up a database that can be connected to django	6	14
Owen Perrin	Set up cluster in Sr. Design lab – Kubernetes Gitlab integration	6	10

### Plans for the upcoming week

- Kale Kester: Improve web design and nodejs page, set up basic interactivity between nodejs page and software or git, assist getting project itself on git for baseline project
- Andrew Phelps: Continue working with dockerfiles and ci/cd pipeline.
- Owen Henning: Continue testing with video fravideo implementation
- Owen Perrin: Finish the setup in the senior design lab of the cluster and deploy Gitlab-connected Kubernetes to the compute nodes.
- Cooper Caruso: Land on a database to use and get is set up and connected to django
- Nick Bergan: Finish working with my own Raspberry Pi and Docker and SeaweedFS, possibly helping to setup remote connections to the cluster.

### Summary of weekly advisor meeting

We discussed more in-depth on the future of the project, including some potential alternate paths to venue towards. We ended up deciding to continue on what we've been working on, as we had last semester to design what we're working on.

### Broader context

We discussed with our client and advisor the context and scope of our project, and ultimately decided to continue the context of our project without any change. As this is an exploration project which is largely for our own benefit, the broader context is very limited. In the

hypothetical expansion of our problem, some considerations likely privacy and energy consumption would be taken into account. We've noted these considerations in our design document.