EE/CprE/SE 492 WEEKLY REPORT

Start Date – End Date

Group Number: 45

Project Title: Skin Cancer diagnosis using Artificial Intelligence on the Cloud

Client &/Advisor: Ashraf Gaffar

Team Members: Megan Eberle, Evan Nim, Alexander Lafontine, Abigail Thompson, Bariture Ibaakee, Breann Grant

- **Weekly Summary**

- Began work on frontend using android studio
- Setting up GCP project
- AI training and inference code implementation

- **Past week accomplishments**

- Good feedback from midterm peer review
- More training with the AI
- Decided on android studio after doing more research about swift.

- **Pending Issues**

- How can/should we confirm that someone is a doctor upon account creation?
- A.I. libraries broke

- **Individual Contributions**

NAME	Hours this week	HOURS cumulative
Megan Eberle	5	13
Evan Nim	6	15
Alexander Lafontine	5	19
Abigail Thompson	5	16
Bariture Ibaakee	8	15

Breann Grant	5	14.5

- **Plans for the upcoming week**

  - Continue development of frontend based on figma
  - Continue training model on the cloud
  - Refresh ourselves on REST APIs and how to implement them in Android Studio

- **Summary of weekly advisor meeting**

  - Summarized our progress to Prof. Gaffar

Midterm Feedback

1. **Summarize the feedback you received (both written and verbal).**

A good amount of our verbal peer review session was clarifying how our project would work, both from an AI perspective and a user perspective. We clarified that we do not plan to have patients using the app, only doctors, to avoid any patient confusion. We also discussed why we chose to build an app rather than a website, which is because it allows us to use the camera on the phone to easily take a photo and upload the image to the app.

One piece of feedback we received was that we could keep the photos and use them to train the model if we received patient consent.

From our written feedback, Team 13 suggested that we host our database on GCP since we will already be using it to host our model. Additionally, Team 13 suggested that we have a plan for our REST API to communicate between frontend and backend. Another suggestion Team 13 had for us was implementing some sort of photo quality standard to prevent misrecognition, which could include image size and the distance between camera and patient. We also were advised to consider encrypting medical and account data.

2. **Describe any new insights your team generated based on this feedback.**

We will consider using a REST API or a similar API and take more time in general to consider how we want the frontend and backend to be connected. We also have not

previously considered encrypting medical and account data, this would be useful to help protect the privacy of our users.

3. What steps are you taking based on the feedback?

To address the concern about image quality, we might consider making a user guide for doctors to follow when using our app, which could include the distance from the skin the camera should be when taking a photo, an appropriate amount to zoom in (probably none), and other important information.

We will refresh ourselves on the use of REST APIs to use when connecting the frontend and backend.