

## EE/CprE/SE 492 BIWEEKLY REPORT

8/31/2020 - 9/14/2020

Group number: 27

Project title: Big Classroom Support

Client &/Advisor: Dr. Lotfi

Team Members/Role:

Brendan Niroula - Leader

Ali Al Ahababi - Front End Development

Jian Kai Lee - Back End Development

Zechen Huang - Facial Recognition Specialist

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### **Weekly Summary**

The objective of this week was to take a picture from the smart glasses and send it to the server to do facial recognition against stored profile pictures. We successfully built the backend image receiver and the front end image sender. Changes to the project include taking pictures with the smart glasses during a live stream, uploading profile pictures and a server that receives images.

### **Past Week Accomplishments**

Sending a picture to the server while streaming - Brendan Niroula

- Researched sending taking a picture in Android Studio without the use of Intents.
- Researched sending a jpeg to a server using Multipart form data and HTTP requests.
- Implemented taking a picture during a live stream and sending the picture to the server.
- Tested the functionality of the picture to server application.

Add a feature to the app- Ali Al Ahababi

- Add the feature of uploading a personal image from the mobile app to the server at the sign up page

Added and API for Sending Image in Django - Jian Kai Lee

- Designed Image saving in Django
- Research in Django Channel to real time message
- Assist Zechen move the django backend from aws to ETG server

Find several ways to use encoded picture, but need to try all of them - Zechen Huang

- One way is to change database to Postgresql, and store them as multidimensional array
- Another way is add new method which could transfer the encoded picture to numpy array

### **Pending Issues**

Extract Image from live stream

Demo the methods and find out which is better

### **Individual Contributions**

Name	Individual Contributions	Hours This Week	Cumulative Hours
Brendan Niroula	Implemented sending a picture to the server while streaming.	4 last week and 8 this week	89
Ali Al Ahababi	Add a feature to the app	4 Last week and 4 this week	80
Jian Kai Lee	Changed and Tested Django backend and database changes from SQLite to MySQL	5 Last week and 5 this week	82
Zechen Huang	Optimize the face recognition server	5 Last week and 5 this week	82

### **Plans for the upcoming week**

- Streaming to the server directly instead of streaming to the android device - Brendan
- Making the UI in the glasses nicer - Brendan
- Django channel and move backend server - Jian Kai Lee
- Optimize the process that face data can be stored locally instead of processing image every time - Zechen Huang
- Work on the case where the student send a request to take a screenshot-Ali
- Integrate Backend server --Zechen & Jian

### **Summary of weekly advisor meeting**

- Made the decision to attempt capturing a frame of the live stream in order to send to the backend for facial recognition.
- Sending a picture to the server will be our backup plan.
- We have different thoughts about integrating the server, and we will try to convince him.