EE/CprE/SE 491 WEEKLY REPORT

3/16/2020 – 4/12/2020

Group number: 27

 Project title: Big Classroom Support

Client &/Advisor: Dr. Lotfi

Team Members/Role:
Brendan Niroula - Leader
Ali Al Ahbabi - Front End Development
Jian Kai Lee - Back End Development
Zechen Huang - Facial Recognition Specialist

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Weekly Summary
These past four weeks we have been tackling some hard hitting challenges. These challenges include streaming video to a server, receiving streams from the glasses and connecting the server with the database and facial recognition software. We have not yet ironed out all the kinks of this, however, we have received our server from ETG and got the server set up. We have also found promising documentation on RTMP and how to use it for streaming to a server. Our main goal is to now connect the backend with the front end. On the face recognition side, due to unavailability of AWS server, we have to move the face recognition database to ETG server.

Past Week Accomplishments
- ● Brendan Niroula
  - ○ Researched and implemented RTMP in android studio. Testing required.
  - ○ Sent data from glasses to phone
  - ○ Implemented my own camera application within the smart glasses
- ● Ali Al Ahbabi
  - ○ Add features to the frontend app
  - ○ Design new UI for the app
  - ○ Connect the front end app with the backend server using http
- ● Jian Kai Lee
  - ○ Successfully setup django restAPI in aws
  - ○ Implementation the GET and POST query in django
  - ○ Setup RTMP live streaming in NGINX in aws

- Zechen Huang
  - Set up all environment requirement for the server and database
  - Workable program available for face recognition system
  - Sample demonstration with available script and ETG server

Pending Issues

Sending video to a server and displaying it using RTMP, Testing RTMP with smartglass and server.

Individual Contributions

Name	Individual Contributions	Hours This Week	Cumulative Hours
Brendan Niroula	Research glasses SDK and setup development environment to support glasses.	1st week: 10 2nd week:6 3rd week:8 4th week: 5	69
Ali Al Ahbabi	Connect the front end app with the backend server using http	24	66
Jian Kai Lee	Implemented RTMP and able to handle REST request and response.	22	60
Zechen Huang	Develop the back end server with Django, and set up face recognition algorithm environment	6 every week for four weeks; total 24 hours	66

Plans for the upcoming week

- Brendan Niroula
  - Streaming video to server through RTMP
- Ali

- ○ Redevelop frontend app to integrate it with the new api in the backend server.
- Jian Kai Lee
  - ○ Test RTMP with smartglass and android and change django database to MySQL.
- Zechen Huang
  - ○ Make seperate server for face recognition and seperate database with Django

Summary of weekly advisor meeting
- Goal is to stream from glasses to the server when prompted by a phone app.