SE/EE/CPRE 492
03/13 - 04/02
Project Title: Economic Home Security System
Group No: 42
Client/Advisor: Goce Trajcevski

Bi-weekly Report 5

Team Members:
Lucas Jedlicka - Lead Engineer DevOps
Uma Abu - Frontend
Merin Mundt - Frontend
Kamini Saldanha - Backend
Sohum Sawant - Backend
Andrew Tran - Backend

Bi-weekly Summary:
We are focusing on wrapping the project up with the simple end-to-end scenario and starting on the final assignments (poster and presentation) that are due soon. We also worked on the peer evaluation video, feedback, and will respond to the comments soon. Online communication has been practiced throughout senior design so overall we did not run into many issues with working virtually.

Open

5

- Status Report 6 - 04/16
  #94
- Personal user interface
  #72
- Motion Detection on Backend
  #82
- Object Detection on Backend
  #83
- Use uWSGI to deploy python instead of the development server
  #65

To Do

6

- Create Node.js WebRTC server
  #89
- Field validation on frontend
  #87
- Video Streaming in Backend
  #54
- Endpoint exposing all streams for a given userid
  #79
- View clips on client
  #77
- Send streams on frontend
  #71

Doing

6

- Status Report 5 - 04/02
  #44
- Create final poster
  #91
- Create Final Presentation
  #95
- Store clips on server
  #76
- Video Streaming in Frontend
  #50
- CI/CD for backend
  #66

Closed

78

- Endpoint for removing user's clip
  #81
- Endpoint for adding user's clip
  #80
- Strip aiortc from Django
  #90
- Attain public IP address for server.
  #88
- Send emails with Python backend
  #93
- Create a wiki
  #70
- Spike: Web application to stream data video from the phone.
  #2
- Peer demo/video
  #86 Mar 18
- Write CRUD Tests for Simple API

Past Iteration Accomplishments:

Lucas Jedlicka: Request to ETG about STUN servers evolved into a request for a public IP address. Request was granted and now the site is accessible from the public internet allowing us to use public STUN/TURN servers instead of self-hosting the port hungry application. Followed Uma's request to look into the Medooze media server. Successfully stood up a demo application for testing our front ends ability to communicate.

Uma Abu: I worked on finding the Medooze media server which uses all the protocol we need to send streams to a server. I worked with Lucas to see if we can get it running local and then send streams from our react application to the media server. I worked on getting the streams to the media server and I am currently working on that.

Merin Mundt: I worked on the presentation for the peer presentation assignment. I also worked on the design of the UI for the streaming and the clips web page. I am also working on and figuring out the specs for the final presentation.

Kamini Saldanha: Working on figuring out requirements for the final presentation for our project. Also, working on completing the final presentation for the project.

Sohum Sawant: I switched my focus from video streaming to working on the poster. I will also be working on the final presentation for the project.

Andrew Tran: Worked on finishing on the REST API. Reverted back to before the aiortc and video streaming libraries were added since we are using a different solution for video streaming. Some endpoints needed minor fixing such as changing response statuses or using filtering instead of iterating through everything in the database. The database had some issues with syncing correctly with the database so some migrations were made to correct it. Documentation was added and general code cleanup/removing unnecessary code was done. Since we couldn't all meet to complete the video, the clips had to be edited for the peer review video. An email endpoint had been added by creating a separate email for the project using gmail's smtp server. This also required some changes to notifications. Lastly, the poster now has a general design and is starting to get populated.

<u>Pending Issues (optional):</u>

Lucas Jedlicka: N/A

Uma Abu: N/A

Merin Mundt: N/A

Kamini Saldanha: No issues.

Sohum Sawant: N/A

Andrew Tran: No issues.

Individual Contributions:

Name	Contribution	Biweekly hours	Total hours
Uma Abu	● Found medooze media server ● Did more research into websocket ● Connect our application to the media server via websockets	**12**	**60**
Lucas Jedlicka	● Public IP for server ● Medooze media server demo ● Remote assistance of teammate ● Public STUN/TURN servers may now be used	**12**	**60**
Sohum Sawant	● Worked on the final presentation. ● Worked on the poster.	**7**	**53**
Merin Mundt	● Reaching Clips endpoint in progress ● Clips in detail ● Final presentation	**5**	**45**
Kamini Saldanha	● Final Presentation	**5**	**49**
Andrew Tran	● Removed aiortc and streaming from Django. ● Fixed database issues. ● Wrote documentation for the Django project. ● Added email feature to server. ● Fixed notifications and general cleanup in backend. ● Edited peer evaluation video. ● Picked template for final presentation. ● Started the final poster.	**15**	**63**

Plans for the upcoming iteration:

Lucas Jedlicka: Slim down the demo application to the bare minimum features required for saving, and streaming videos to the frontend.
Uma Abu: Send the stream to the media server. The server and clients are connected via WS and the only thing left is to send the stream
Merin Mundt: Getting the clips to preview on the UI with timestamp description about the clip
Kamini Saldanha: Gather more concrete requirements for the presentation and have most of it done.
Sohum Sawant: Finishing up the poster and making sure that all backend components are working correctly.
Andrew Tran: Work on the final poster and syncing with frontend.

Summary of Advisor Meeting:
We discussed the format and how we should proceed with the final presentation along with what we need to accomplish for the rest of the semester. For the poster, we were given some suggestions and were reminded to balance between images and words. For the presentations, we should keep it short and cut down the slides to account for issues meeting online, animate our slides, put the speaker's name on the slides and have a backup speaker for each slide in case something happens.