

sddec20-11: Dash Cam Defender

Bi-Weekly Report 6

October 27 - November 9

Team MembersEvan Timmons — *Team Leader*Ismael Duran — *Full Stack Developer*Danny Yip — *Head Test Engineer*Cobi Mom — *Chief Mobile Engineer*Durga Darba — *Head Data Engineer*Scott Vlastic — *Head Hardware Concept Engineer*

Summary of Progress this Report

Dashcam Defender™ Jetson GUI Team - Evan

- Implemented new tool in conjunction with the GUI allowing for proper video recording and AVI output files
- Tested and verified full GUI operation in the development stage
- Removed pause and resume buttons and added upload button
- Restructured GUI code and cleaned up unnecessary components for the final design

Dashcam Defender™ Hardware Team - Durga & Scott

- Implemented uploading the video.avi and JSON file from the NVIDIA Jetson board to the Amazon S3 bucket
- Connected the upload button on the GUI to the python script to upload proper files
- Continued testing the effectiveness and accuracy of the OpenALPR license plate recognition

Software Development Team - Ismael, Danny & Cobi

- Architect the database and storage to access the videos stored in the AWS S3 bucket efficiently.
 - Developed a Lambda Function to be used as a mobile application API call that will retrieve the more recent videos under the given users' account
 - Create the video player interface that will allow the user to watch videos directly on their phone
 - Create an API calls the will get the video URL location to allow streaming on the mobile application
 - Worked on parsing license plate information that comes from the Jetson board
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Pending Issues

Full Team

- Ensure that AWS charges are covered

Dashcam Defender™ Hardware Team - Scott & Durga

- Ensure that the proper files are being uploaded to the correct area

Software Development Team - Ismael, Danny & Cobi

- Come up with a way to give cars a rating when not every vehicle is a registered account
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Plans for Upcoming Reporting Period

Dashcam Defender™ Jetson GUI Team - Evan

- Assist Scott in final testing of ALPR board
- Complete validation testing of the software

Dashcam Defender™ Hardware Team - Scott, Evan & Durga

- Continue testing the final functionality of the product
- Perform more testing in the vehicle environment

Software Development Team - Ismael, Danny & Cobi

- We are working on implementing a lambda function that will deal with the rating system of a vehicle.
- Complete testing the mobile application
- Make sure everything works as we plan

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Evan Timmons	Resolved the issue from the previous week by implementing a new tool that properly encodes and saves video files as AVI. Cleaned up and finalized GUI by editing superfluous code, removing the pause and resume buttons, and adding an upload button.	11.5	76.5
Ismael Duran	Structure of the database and storage that will allow for retrieving videos from the AWS S3 bucket. Developed the API call to give the mobile application URLs that will stream videos from the S3 bucket.	13.2	74.7
Danny Yip	create a User interface (View videos) to search the user's video named the timestamp and the video. The video is pulled from S3 buckets. Successfully pull a list of JSON.	13	75
Cobi Mom	Worked on parsing data that comes directly from our NVidia Jetson. The data is processed by OpenALPR beforehand, and our lambda function parses the data into our database.	14	75
Durga Darba	Worked on creating JSON being sent to the database. Worked with Scott on the upload script and integrating with the GUI	12.5	75.5
Scott Vlastic	Implemented uploading videos and JSON files from the Jetson board to the Amazon S3 bucket via a python script. Made the upload button on the GUI run the script	12.5	74