
sdmay19-16: Smartphone App to Detect TwD (Texting while Driving)

Week 5 Report

Feb. 4 - Feb. 10

Team MembersKristina Robinson - *Project Lead*Andrew Knaack - *Lead Designer*Sara Mace - *Meeting Scribe*Lucas Golinghorst - *Test Engineer*Ryan Baker - *Architect*Derek Clayton - *Report Manager*

Summary of Progress this Report

Our focus for this reporting period was to work on the texting, camera, and acceleration modules. Also, research was conducted on third party solutions to spell-checking and implementing TensorFlow in Android Studio. Additionally, an experiment was conducted to determine the difference in texting speeds between those who are texting vs. those who are not. Texting speed module was modified based on this new data.

Pending Issues

- Texting application still has display errors that must be resolved.
 - A third party method of spell-checking must be found.
 - A method for calculating centripetal acceleration must be developed.
 - TensorFlow must be implemented into Android Studio for the camera module.
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Plans for Upcoming Reporting Period

Kristina - Collaborate with Sara on the texting application and figure out how to get the application to show each new message underneath previous message instead of a new page.

Andrew - try out 3rd-party methods of spell-checking

Sara - Collaborate with Kristina on the texting application and figure out how to get the application to show each new message underneath previous message instead of a new page.

Lucas - Get demo app working on test device.

Ryan - Get demo app working on test device.

Derek - Determine a method of calculating centripetal acceleration using phone sensors and display calculations in app.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kristina Robinson	Work on texting application to get messages to	6.5	19

	show up on same screen and on the correct side of the screen. Currently cannot get it to work correctly.		
Andrew Knaack	Found potential 3rd-party spell check solutions. Performed simulations to determine texting speed differences when distracted. Reprogrammed text speed tracker to reflect results and successfully prevented texting when text speed conditions are fulfilled.	8	24
Sara Mace	Worked on the texting application and tried to determine why the messages were appearing on the wrong side of the screen, but was unsuccessful in figuring it out.	6	20
Lucas Golinghorst	Did research to find ways to configure tensorflow in Android Studio. Found a demo application that pertains to our project's use cases and configured demo application in Android Studio. Reviewed the demo code for insight into how to effectively use Tf api.	7	19
Ryan Baker	Researched which version of Tensorflow was best for our purposes. Also looked into different ways to train the program and different libraries that could be of use. Last, we got a demo to work that could identify various objects.	6	18
Derek Clayton	Worked on acceleration module. App is now capable of displaying x, y, z-axis accelerometer data on android phone.	7	19.5
		Total Group Hours:	119.5

Gitlab Activity Summary

Sara created a new branch for texting application (2/7).

Andrew enabled texting prevention via clearing text box [2 changed files, 44 adds, 60 dels](2/7).

Derek set up accelerometer module using gyroscope example [8 changed files, 160 adds, 21 dels](2/11).

Derek fixed accel module errors, displays accelerometer data now [4 changed files, 5 adds, 5 dels](2/11).