**Second Milestone Report**

David Kelly

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**Title**  
Improve the process of updating software in electric vehicles by making sure that the update has been approved using customer credentials.

**Description**

The contribution is to recommend that the updates of software would require that the customers credentials be validated using multi-factor authentication. Biometrics, tokens, userId/password and sms should all be considered.

**Status of the Project**

The draft of my paper includes a title, abstract, introduction, body, proposed update process and conclusion. The sections and content will change as the paper matures. I took a Udemy course on writing a scientific research paper.

I have discovered more resources needed to continue writing my paper (truncated):

1. Scooter Dolls, “[Over-the-air updates: How does each EV automaker compare](https://electrek.co/2021/04/01/over-the-air-updates-how-does-each-ev-automaker-compare/)
2. I. D. Foster, A. Prudhomme, K. Koscher, “Fast and vulnerable: A story of telematic failures
3. C. Miller and C. Valasek, Remote exploitation of an unaltered passenger vehicle
4. Geunhyoung Kim, Integrity Assurance of OTA Software Update in Smart Vehicles
5. Nick Lethaby, A more secure and reliable OTA update architecture for IoT devices
6. Kyounggon Kim, Cybersecurity for autonomous vehicles: Review of attacks and defense
7. William Stallings, Lawrie Brown, Computer Security Principles and Practice

**Status of the milestones:**

Milestone 1-3 were completed in the first milestone report.

Milestone 4 is complete: recommend security changes for the vehicles update process using MFA.

Milestone 5 is complete: propose how the customers credentials will be applied for each software update.

**Milestones yet to be accomplished**

1. Complete an outline (mostly complete)
2. Gather all references (mostly complete)
3. Finish the introduction, body and conclusion.
4. Apply conference style formatting for publication review in the IEEE/ACM conference.

**Proposed time line to accomplish the remaining milestones**

Complete all of these tasks by the project demo interview:

Outline, final reference list, introduction, body, conclusion and implement the styles for the IEEE/ACM conference.