

Cyber Security Attack Models for Connected Vehicles

Project Description

The increase of connected vehicle complexity is advancing at an accelerating pace, as is the capabilities of such systems to be adapted for other tasks than originally envisioned.

More and more systems are expected to share resources such as functionality, sensor data, data storage and communication channels, at the same time that the systems become increasingly autonomous.

As this development progresses, it will become increasingly important to analyse safety and security as a coordinated effort, rather than each property on its own.

The goal of the thesis is to provide attack models for security breaches in a system that may lead to system safety not being guaranteed.

Questions to be answered include:

- What is the impact of such attacks on the system?
- How may such situations be prevented?

The work will focus on connected vehicles with the aim to show the common points of safety and security interplay.

Administrative Details

The thesis work is expected to commence in January of 2018 by two students, to be completed by the end of June 2018. Knightec will supply an industry supervisor, desk space at the local Knightec office, computer equipment and any additional resources required to complete the project.

More information about the Knightec specialty area Connected Device Security can be found here:
<http://www.knightec.se/competence/connected-device-security/>

A monetary reward will be provided for a successfully completed project, and future employment at Knightec is expected to be offered.

How to Apply

To apply for consideration, please describe yourselves, your backgrounds, why you wish to be a part of this project and any additional thoughts you have in a document of roughly one page, in either English or Swedish, and submit it to david.wenslandt@knightec.se or riccardo.scandariato@cse.gu.se.

Feel free to contact either of us with any questions or concerns you may have.