



CARISSMA

Institute of Electric,
Connected and Secure Mobility



Technische Hochschule
Ingolstadt

June 2022

Abschlussarbeit

“Blockchain-based Internet of Things (IoT) system for locomotive fuel monitoring and maneuver coordination”

Beschreibung:

In recent months, fuel prices have soared due to the economic crisis caused by Covid-19 and the war between Russia and Ukraine. The increase in fuel prices increases the incidence of theft. Approximately 150,225 liters of fuel are stolen in road transport on the Swedish market. A study carried out by the European Commission estimates that the damage caused by cargo theft in rail and road transport is approximately 8 billion euros per year. This fuel theft of fuel theft direct impacts and indirect impacts are reported as (i) delay in product delivery, (ii) need to tow the locomotive, and (iii) customer dissatisfaction. The objective of this master thesis is to develop a blockchain-based platform for monitoring and tracking the volume of fuel in locomotive tanks, which could be the result of theft or leaks. This platform can be integrated with a system capable of generating real-time alerts for the operation and alarms to inhibit the action of criminals. There are commercial sensors and monitoring systems for locomotives that could serve as integrators for this solution to be developed.

Ihre Aufgaben:

- First Phase: Definition of experiments.
- Second Phase: Development of the blockchain-based platform.
- Third Phase: Writing the text document of the thesis, representing/presenting the results.

Ihr Profil:

- Java or Python experience and knowledge are desirable but not required.
- Sicherer Umgang mit MS-Office
- Ausgeprägte Kommunikations- und Organisationsfähigkeiten

Interesse? Fragen? – Kontaktieren Sie uns!

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