



CARISSMA

Institute of Electric,
Connected and Secure Mobility



Technische Hochschule
Ingolstadt

June 2022

Abschlussarbeit

“Development of a system to identify fraud in fuel supply chain”

Beschreibung:

Oil is a scarce and non-renewable natural resource. In recent years, its market value has skyrocketed, mainly motivated by the pandemic caused by Covid-19 and the war between Russia and Ukraine. Fuel adulteration is a clandestine millionaire market that moves billions of reais worldwide. It is estimated that tampering is responsible for losing 300 million dollars a year. The objective of this thesis is to develop a platform based on a permissioned blockchain network to track the entire fuel supply chain. This system is also capable of monitoring fuel quality and price in real-time. The main novelty of the work is the proof of concept of a blockchain-based fuel tracking system. The proposal aims to inhibit tax fraud, fuel adulteration, environmental impacts, and opportunistic behavior.

Ihre Aufgaben:

- First Phase: Definition of the fuel supply chain.
- Second Phase: Development of a blockchain-based platform for fuel tracking.
- Third Phase: Writing the text document of the thesis, representing/presenting the results.

Ihr Profil:

- Experience and knowledge of Python are desirable but not required.
- Basic knowledge of battery systems would be desirable.
- Confident use of MS Office.
- Excellent communication and organizational skills.

Interesse? Fragen? – Kontaktieren Sie uns!

Kontakt:

Carlos Antônio Rufino Júnior
E-Mail: carlos.rufino@carissma.eu

Prof. Dr. Hans-Georg Schweiger
Hans-Georg.Schweiger@thi.de

