WIR VERGEBEN EINE

MASTERARBEIT / MASTER THESIS

ENERGIEVERBUNDTECHNIK

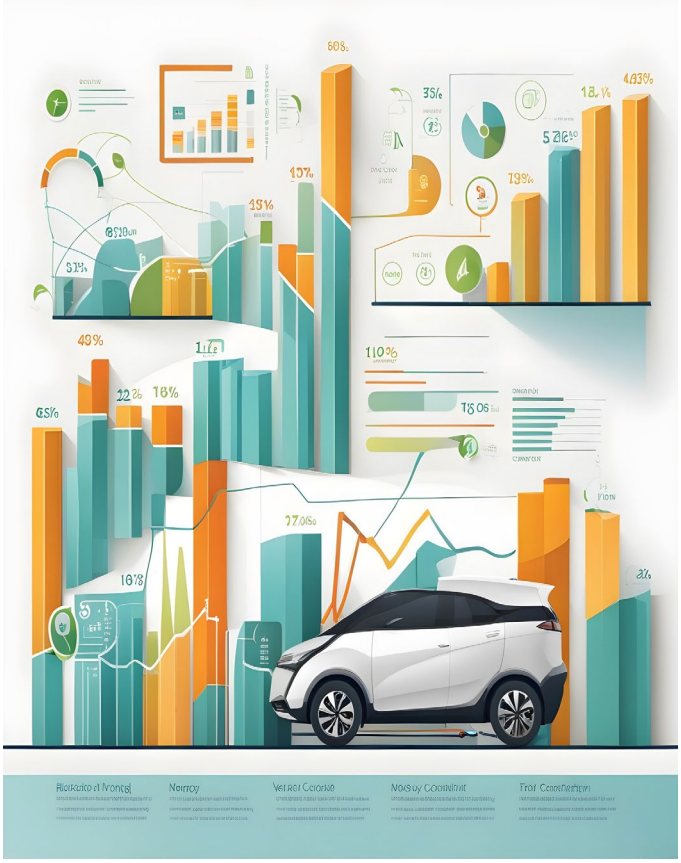
In the field of e-mobility and electrical grid

Work title:

"Investigating the Impact of Data-Driven Strategies on Electric Vehicle Load Profiles: A Programming-based study"

Background:

This master's thesis launches on a comprehensive investigation of how data-driven strategies, as well as programming techniques, can shed light on the complex dynamics of Electric Vehicle (EV) load profiles. The study uses cutting-edge programming and data analysis tools to explore how environmental conditions (temperature and humidity), temporal variables (date of arrival and the driving distance per day) and charging strategies influence on EV load profiles. Through the development of custom model, preferably from Recurrent Neural Network (RNN) models such as Long short-term memory (LSTM) or Gated recurrent units (GRUs), the research seeks to provide a deep understanding of how these factors interact and affect the power demand of EVs. However, using other types of models such as Support Vector Regression (SVR) would be of true value. By using programming as a core methodology, this study aims to offer practical forecast for the future EVs load profiles.



Outline of the content:

- Literature review to improve the academic background
- Studying data required for investigating EVs load profile
- Investigating the influence of those data on the load profile by using data-driven strategies
- Examining different models and find the most promised one for this reseach

Requirements:

- Background in Electrical Engineering
- Programming and data analysis skills
- Interest in Electric Vehicles (EVs)
- Motivation to Solve Complex Problems

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Are you interested? contact me

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