Electric Vehicle Charging Predictor

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Project

Partner project (P12)

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Goal

- Predictor of the **Driving behaviour** for the next 24 hours
- Predictor of the **State-of-Charge** for the next 24 hours
- Predictor of the **Grid connection** for the next 24 hours
- API & Web application (UI)
Driving Behavior

Recurrent Neural Network

Input → Reshape → LSTM → LSTM → LSTM → Dense → Output
Driving behaviour
State of Charge

Recurrent Neural Network

Input → Reshape → LSTM → LSTM → Dense → Output
State of Charge

Total used energy: 61.75795
Total charged energy: 60.11102
Voting Classifier

Data → GaussianNB (0.25)
Data → Random Forest (0.25)
Data → XGBoost (0.25)
GaussianNB → Prediction (0.5)
Random Forest → Prediction (0.5)
XGBoost → Prediction (0.5)

Grid Connection
Grid connection
State of Charge
What did we learn?

- Analyzing data
- The usage of RNN
- Implementation of models in a web-based UI
https://github.com/aleks96n/Electric-Vehicle-Charging-Predictor
Thank you.