Case Study 2:

Probability Distributions of Day-Ahead Electricity Prices

(Detailed Case Study Report)

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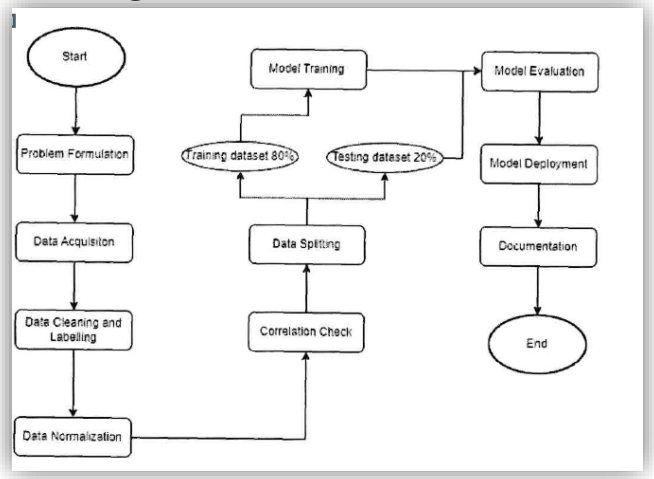
The objective is to introduce a maching learning (ML) approach to probabilistic forecasting of hourly electricity prices. The proposed method is an non-parametric and selects the best distribution from all possible empirical distributions learned from dataset. The probabilistic forecasting approach is especially beneficial when working with complicated systems, dynamic environments, and situations in which uncertainty plays an important role. It forecasts hourly day-ahead electricity prices by estimating the range of probable values and their associated probabilities. This form of forecasting is critical for making decisions in the energy markets.

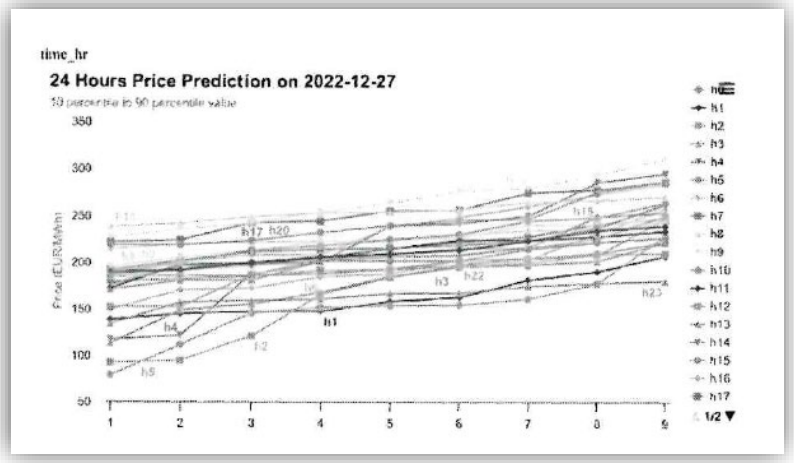
A user-friendly and interactive web-based using Flask which can be accessed through QR Code. The UI facilitates accessibility and usability.

Keywords – Probabilistic forecasting, Machine learning, Artificial neural network, Flask, Graphical user interface.

QR Code: Graphical user interface



Methodology flow chart



24 hours electricity price prediction