

TEAM ORACLE

Net-Load Forecasting Model

A novel developed deep learning-based model:

- Keeps effective normalized inputs from historical data
- Removes duplicate normalized inputs
- Performs shuffling on the data appropriately
- Avoids overfitting by data clustering

Method: Developed Deep Learning

Architecture: LSTM-based deep learning model

Objective: Accurately forecast net-load

Data: Hourly net-load

Performance Metrics:

- Mean Absolute Percentage Error (MAPE)
- Root Mean Squared Error (RMSE)

Expected results:

- The future net load for 24 hours
- The forecast for 28 days

Run length: 24 hours

Interval length: 1 hour

```
[ ] ### Keras and TensorFlow
import numpy
import xird
import csv

filename = 'Load_data.csv'
raw_data = open(filename, 'rt')
reader = csv.reader(raw_data, delimiter=',', quoting=csv.QUOTE_NONE)
x = list(reader)
df1 = numpy.array(x).astype('float')
print(df1.shape)
```

(8760, 1)

```
[ ] import matplotlib.pyplot as plt
plt.plot(df1);
```

