Peramalan Beban Listrik Jangka Pendek Menggunakan Jaringan Syaraf Tiruan = Short Term Electrical Load Forecasting Using Artificial Neural Network

Fajar Alya RahmanFajar Alya Rahman, author

Abstrak

[ABSTRAK
Peramalan beban listrik memegang peranan yang sangat penting bagi efisiensi dan
kinerja dari PLN. Berbagai jenis metode dipakai untuk mendapatkan hasil peramalan beban yang akurat agar daya yang dikirimkan sesuai dengan kebutuhan
listrik dari konsumen. Skripsi ini membahas peramalan beban jangka pendek satu minggu ke depan dengan menggunakan Jaringan Syaraf Tiruan (JST). Peramalan
beban jangka pendek sangat dipengaruhi oleh faktor-faktor cuaca, yang dalam hal ini menjadi masukan JST, yaitu : Suhu, Kelembaban, Tekanan udara, dan
Kecepatan angin. Data yang digunakan untuk pembelajaran adalah data sebenarnya sepanjang tahun 2011. Arsitektur yang digunakan adalah feed-forward
dan algoritma yang dipakai adalah algoritma backpropagation. Berdasarkan hasil
didapatkan nilai MAPE terbaik sebesar 1.8 % dan untuk 10 kali running sebesar 2.65 % sehingga berada di bawah ambang kesalahan peramalan.
ABSTRAK
Electrical load forecasting has an important role for efficiency and performance
from PLN.Various types of methods have been used to provide an accurate load
forecasting on purpose that the transmitted power appropriates the demand of
consumers. This research will discuss short term load forecasting using Artificial
Neural Network (ANN). Short term load is influenced by weather factors, those
will become input of ANN, i.e. : Temperature, Humidity, Pressure, Wind speed,
Data used for study are actual data in 2011. Architecture used for this research is
feed-forward and Algorithm that is used is backpropagation . The final result
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