

question

73 views

Factors in Usage Models?

In one of the videos, Dr. Sokol mentions modeling variability in usage and estimating future power usage. What confused me is the factors he lists to inform those models:

Power Cost Estimation

Customers with long history

- **Given**
customer credit, financial, and payment history data; and possibly some demographic information
- **Use**
Exponential smoothing or ARIMA
- **To**
estimate the amount of power a customer will use in the next month

When considering variability in usage

- **Given**
customer credit, financial, and payment history data; and possibly some demographic information
- **Use**
GARCH
- **To**
estimate the amount of variability in a customer's power usage next month

Customers with shorter or longer history

- **Given**
customer credit, financial, and payment history data (if available); and possibly some demographic information
- **Use**
A regression-based model (simple regression, tree-based, or clustering followed by regression)
- **To**
estimate the amount of power a customer will use next month



For GARCH and ARIMA/Exponential smoothing, why does he list factors like customer credit, financial data, etc. Wouldn't you only need the past usage data to build the time series model off of? For example, when we did the weather extrapolation HW, we only had previous weather data and we built a model off of that.

hw8

Updated 9 hours ago by Sam Marquez

the students' answer, where students collectively construct a single answer

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the instructors' answer, where instructors collectively construct a single answer

That's a great question. GARCH and ARIMA can both be used to create models with additional explanatory variables besides just the time series. However, that is out of scope of this course.

Updated 4 hours ago by Margaret Bolton

followup discussions for lingering questions and comments