What does Submetering Data Show?

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IOT Analytics

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Agenda

IOT ANALYTICS

Overall Trends

Monthly Patterns
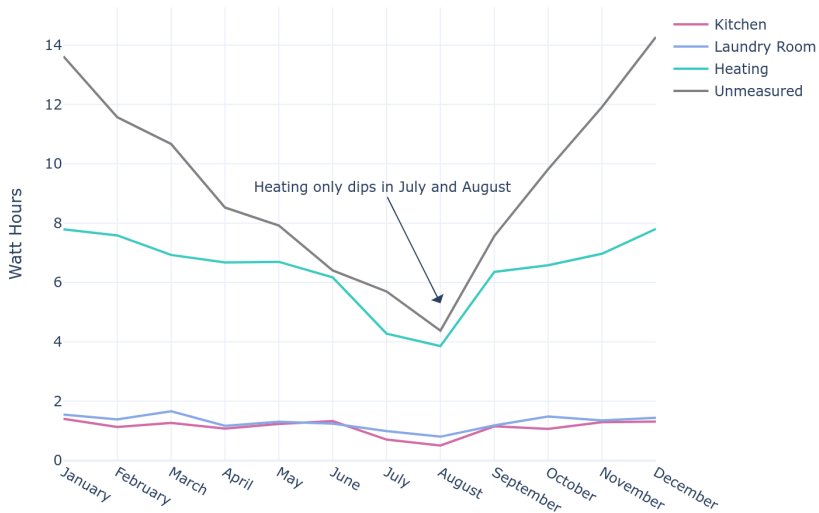
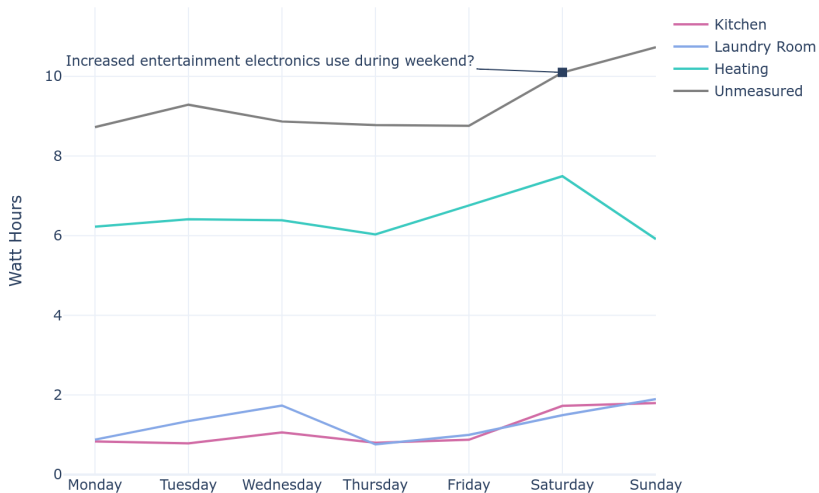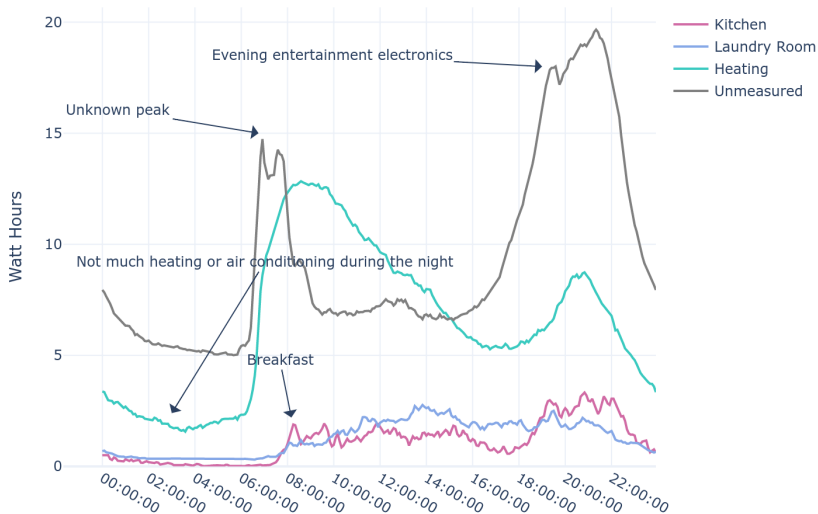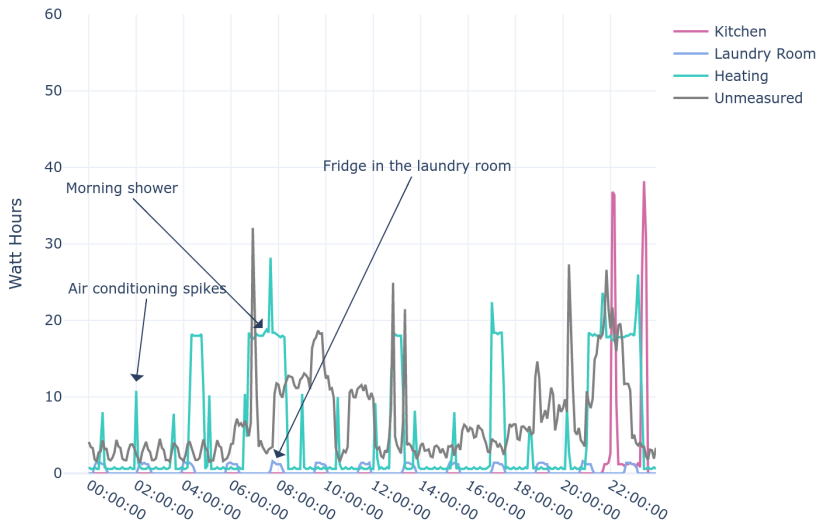# Weekly Patterns
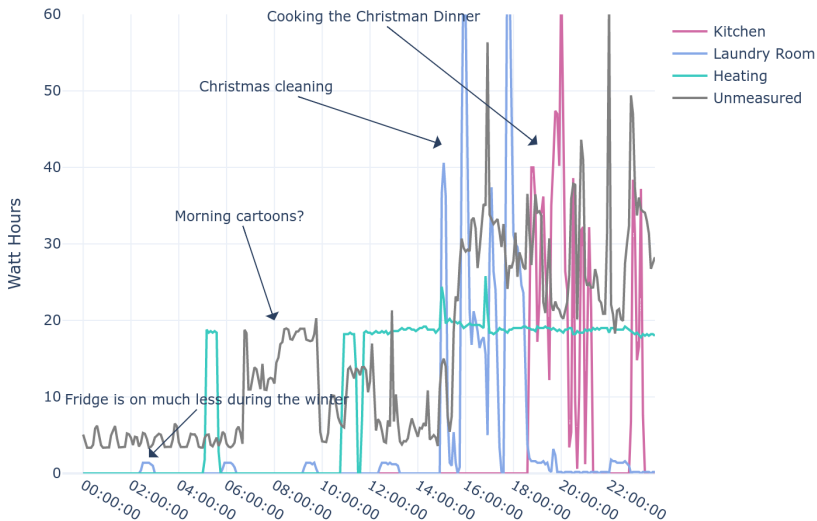
Daily Patterns

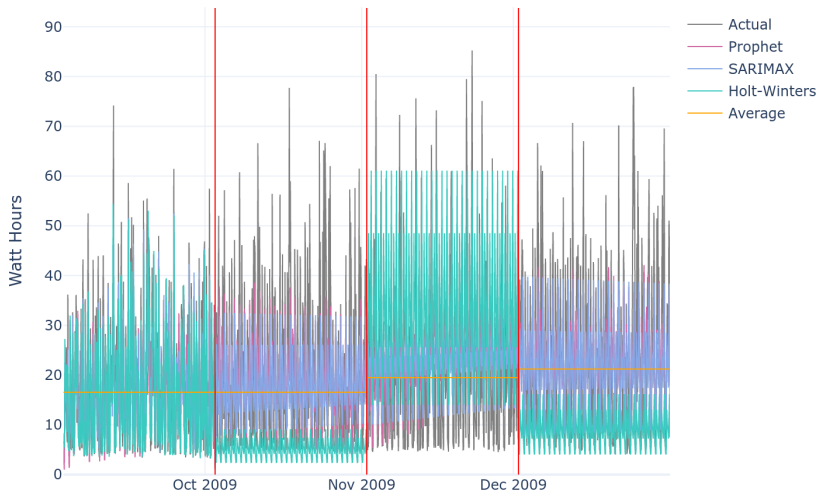# A Typical Summer Day

Christmas Holiday

Cooking the Christman Dinner

Christmas cleaning

Morning cartoons?

Fridge is on much less during the winter

Watt Hours

Legend:
- Kitchen
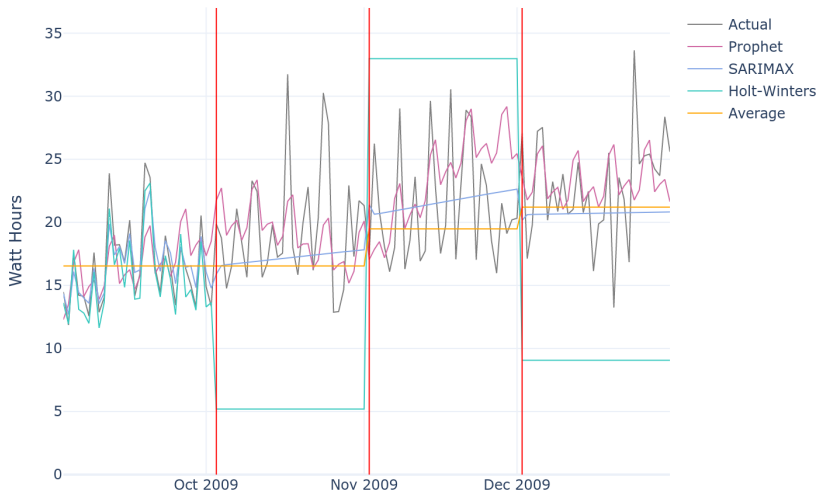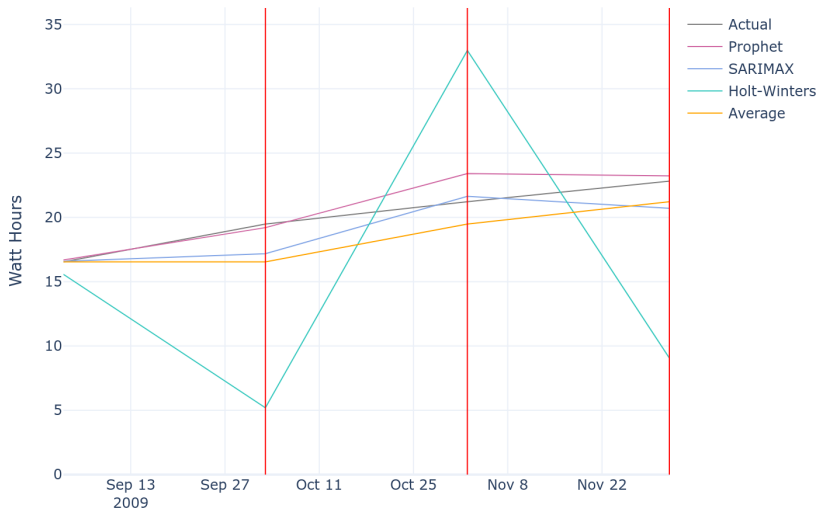- Laundry Room
- Heating
- Unmeasured

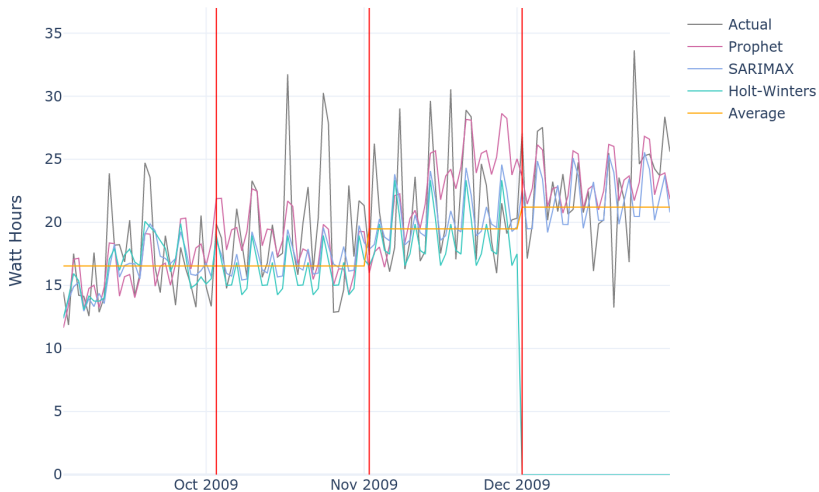# Hour Level Model - Predicting Hours for One Month

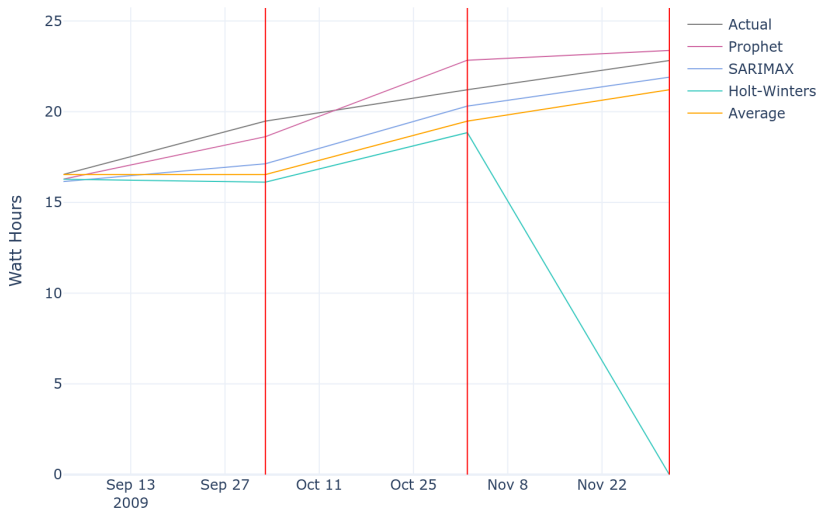# Hour Level Model - Predicting Days for One Month

Hour Level Model - Predicting for One Month

Day Level Model - Predicting Days for One Month

Day Level Model - Predicting for One Month

Conclusions

1. Privacy!
   - Individual days show an intimate picture of how people live their lives
   - Even aggregated measures show private information
2. Security! $\Rightarrow$ A burglar could see when somebody is at home
3. Categorizing patterns with a machine model would probably be possible, but would require lots of manual effort, because we would have to label the observations ourselves
4.

Questions?