Clustering Applications: Customer Usage Archetypes

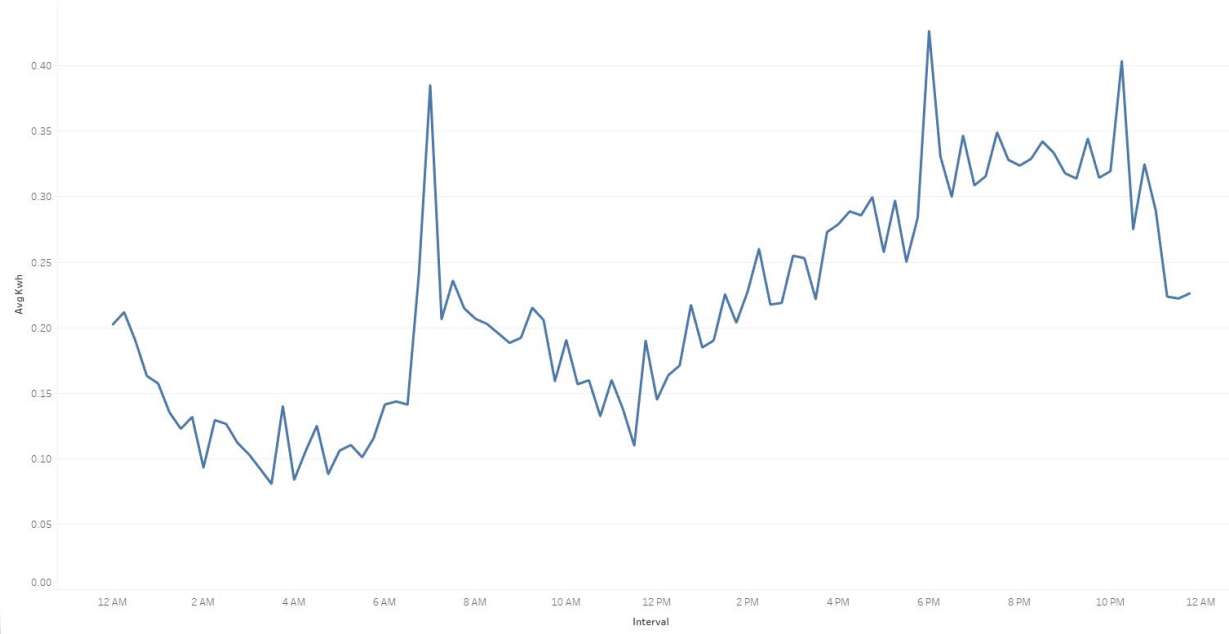
June 2019

Brian Smith
Data Engineer & Analyst
Electric Power Board of Chattanooga, TN

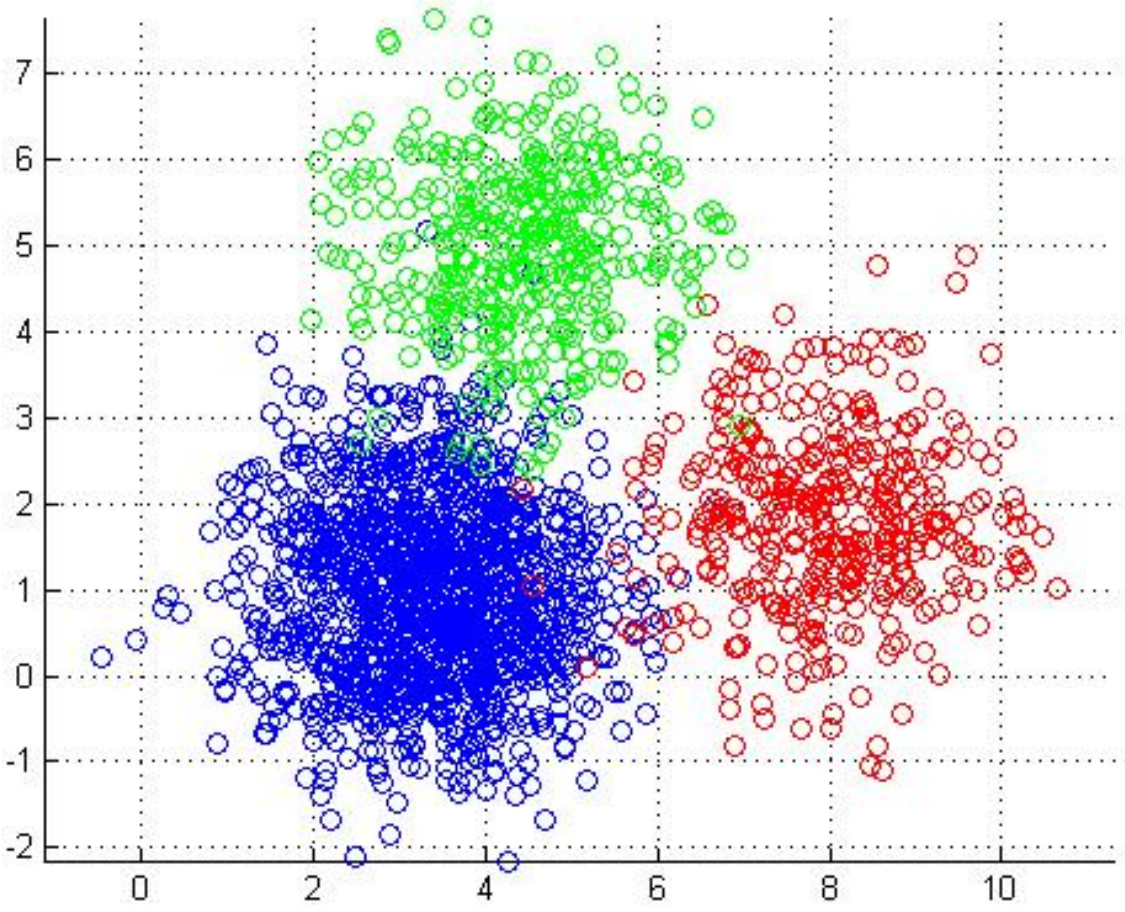
Who is EPB?

Customer Load Profile

- 15-minute meter reads
- Average at each interval to get ‘typical day’, i.e. average kwh between 1:00 and 1:15 AM, between 1:15 and 1:30 AM, etc.



Clustering Overview



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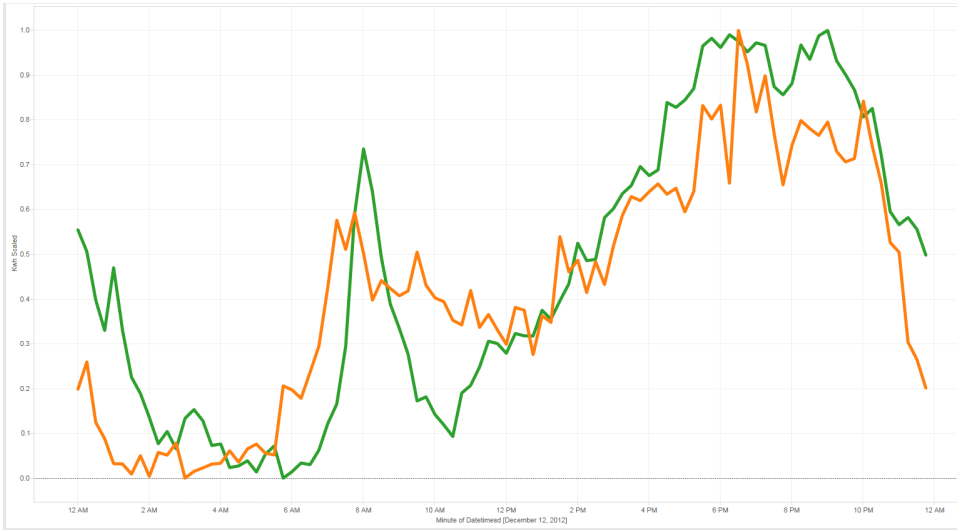
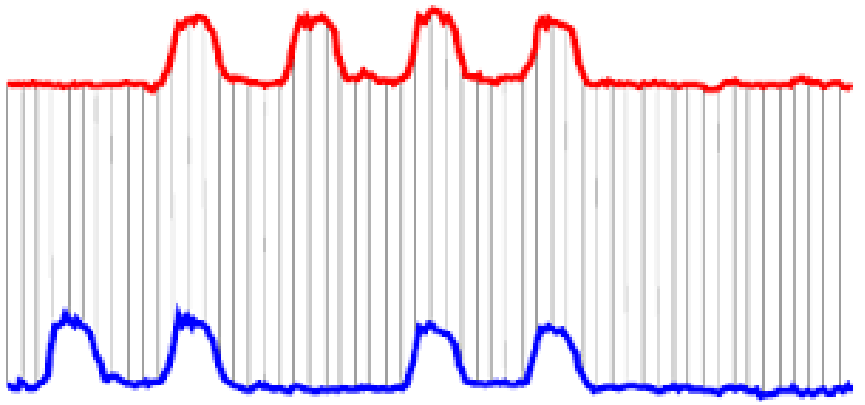
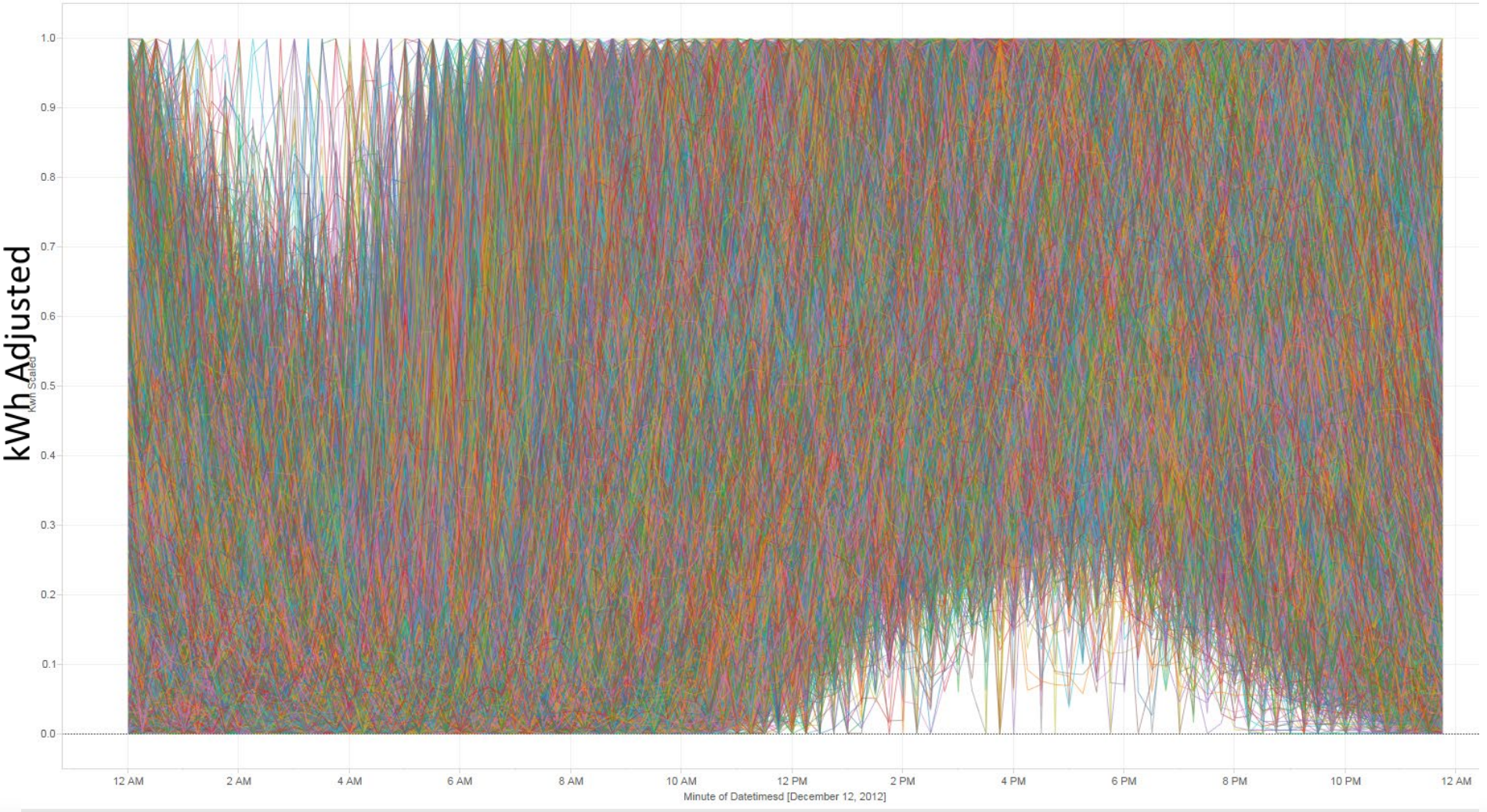




Mass Clustering Customer Load Profiles



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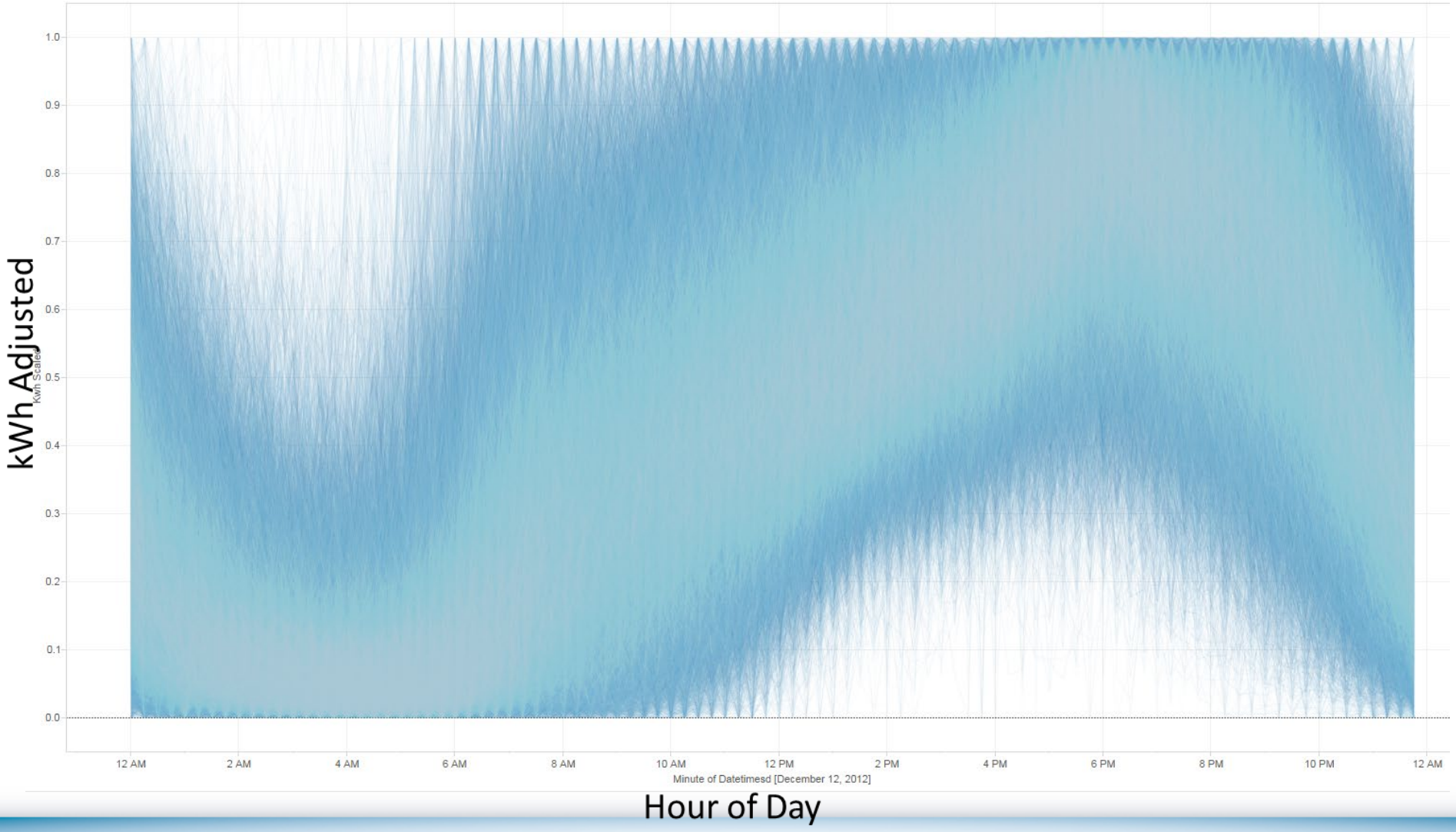

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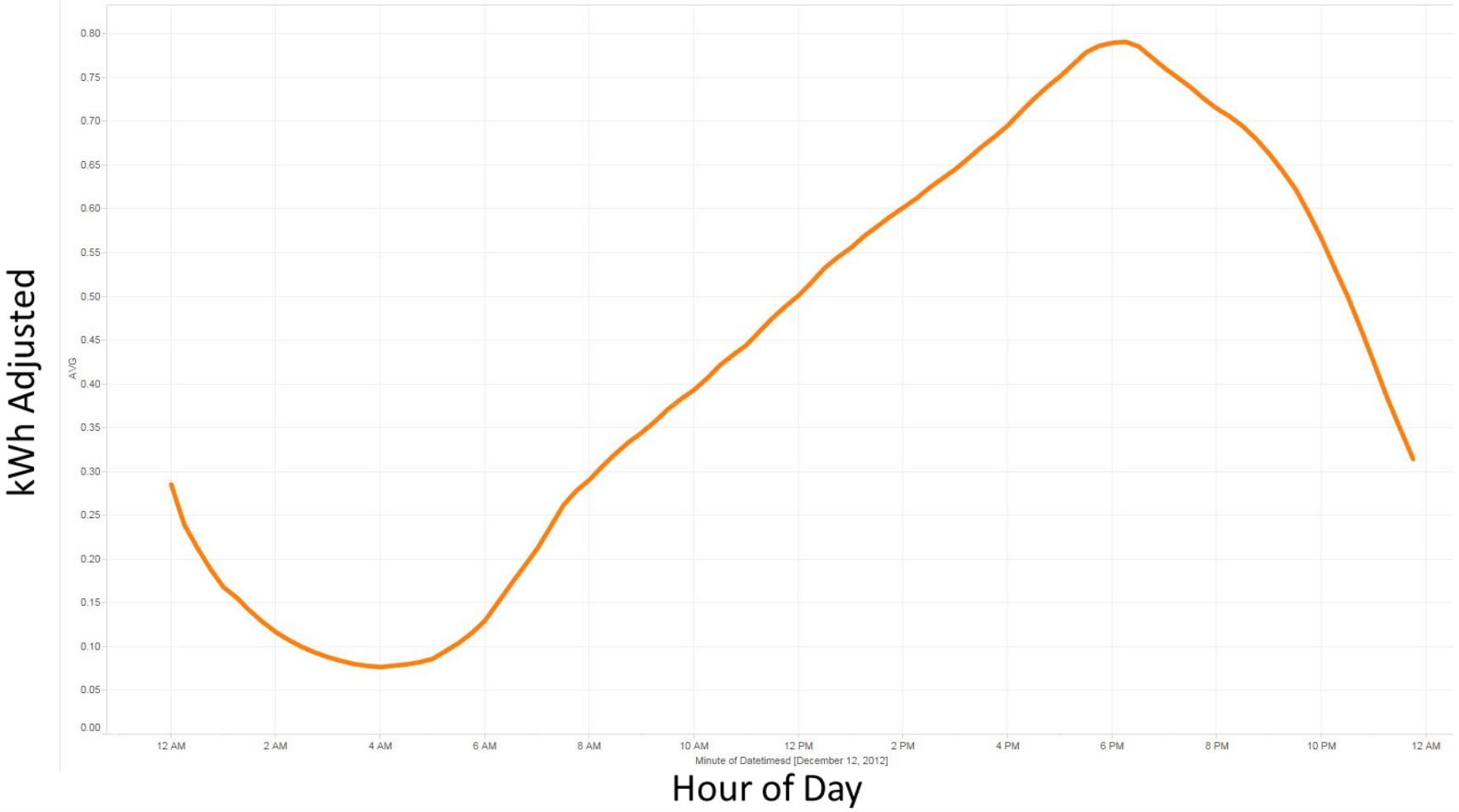

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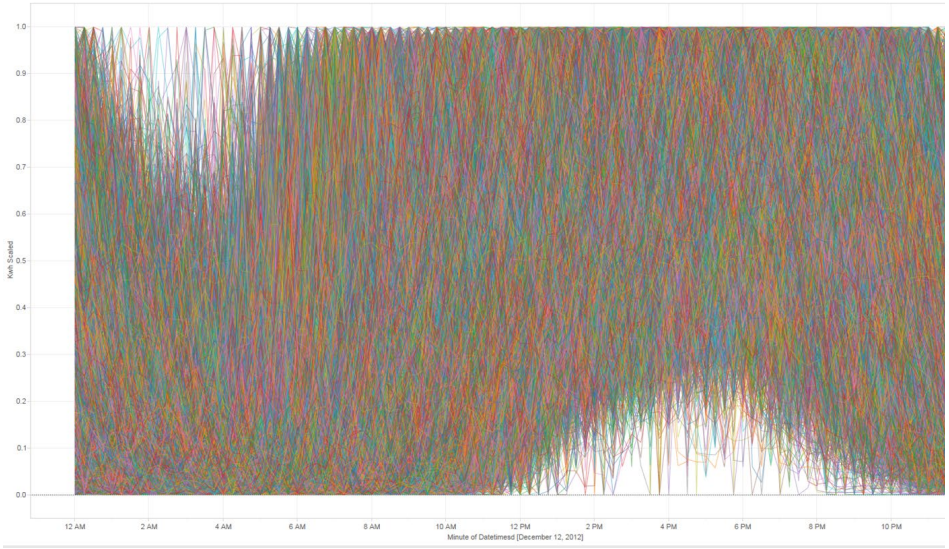

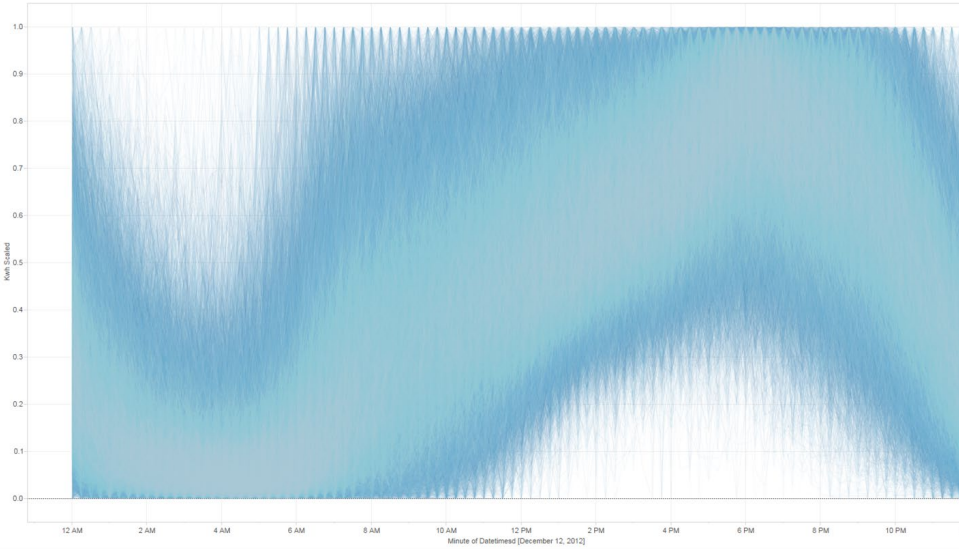

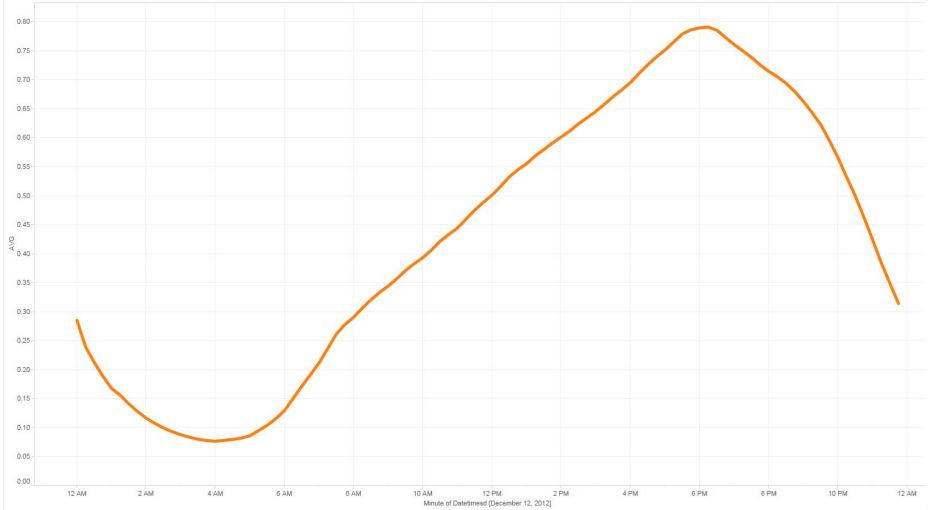

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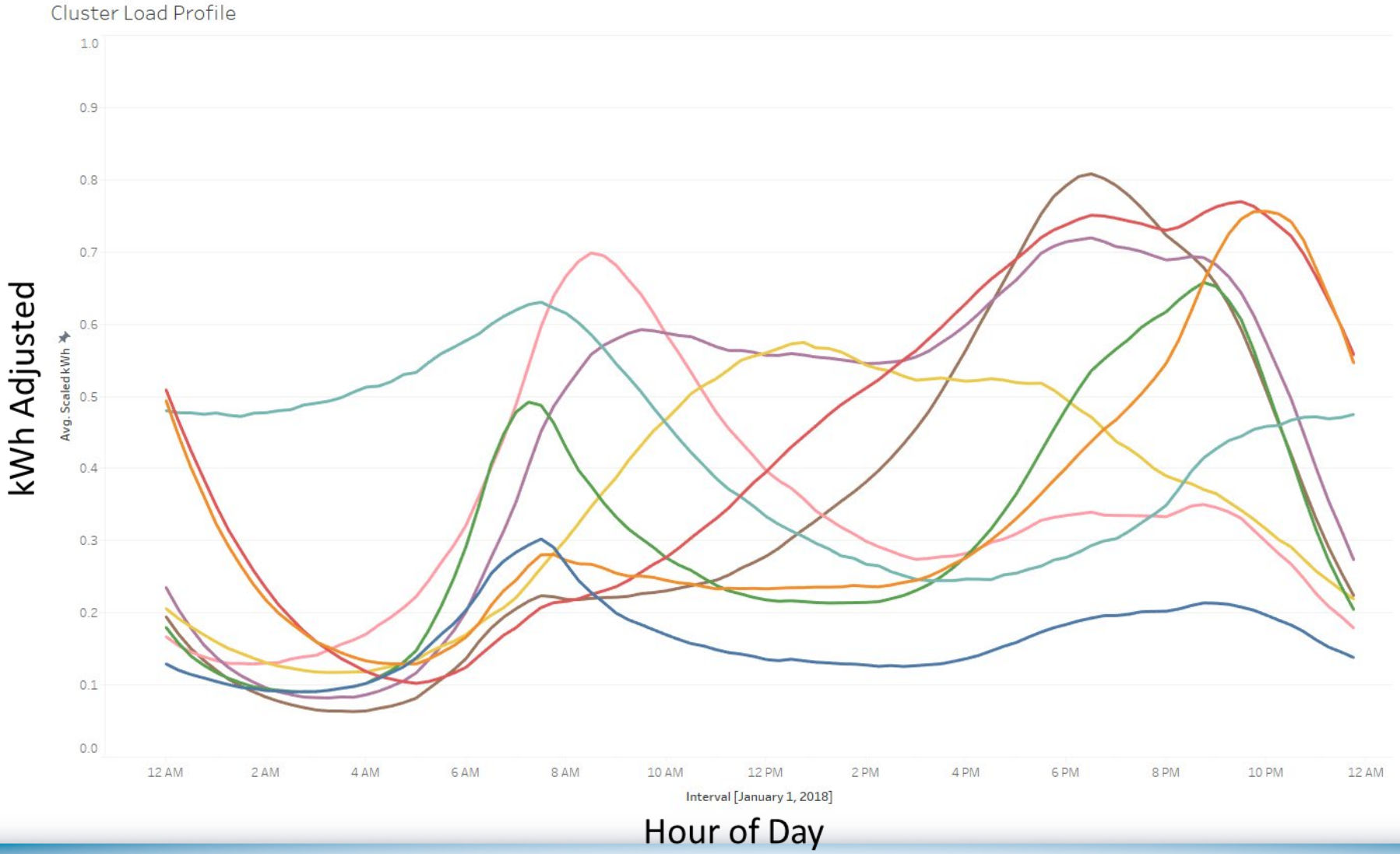

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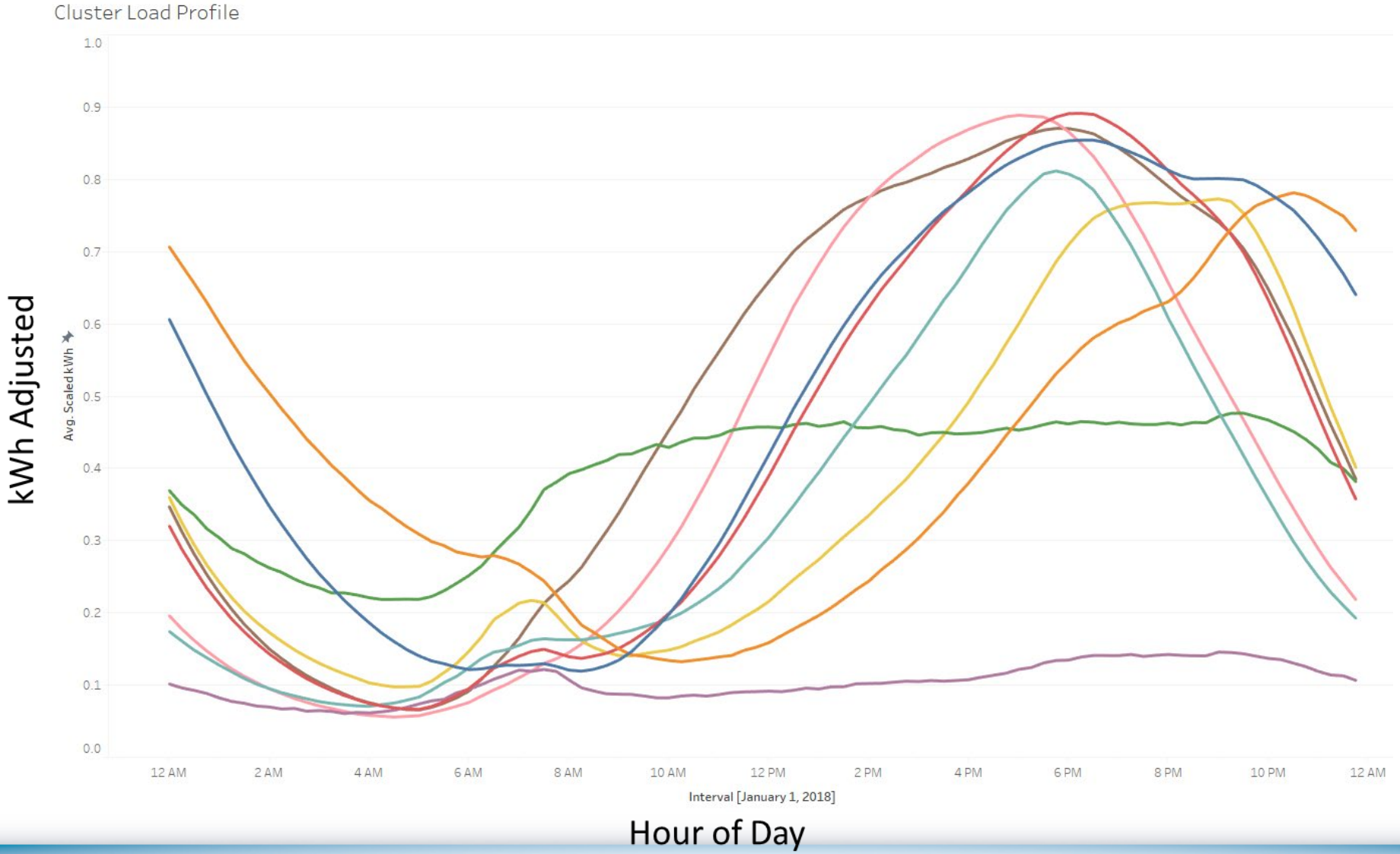
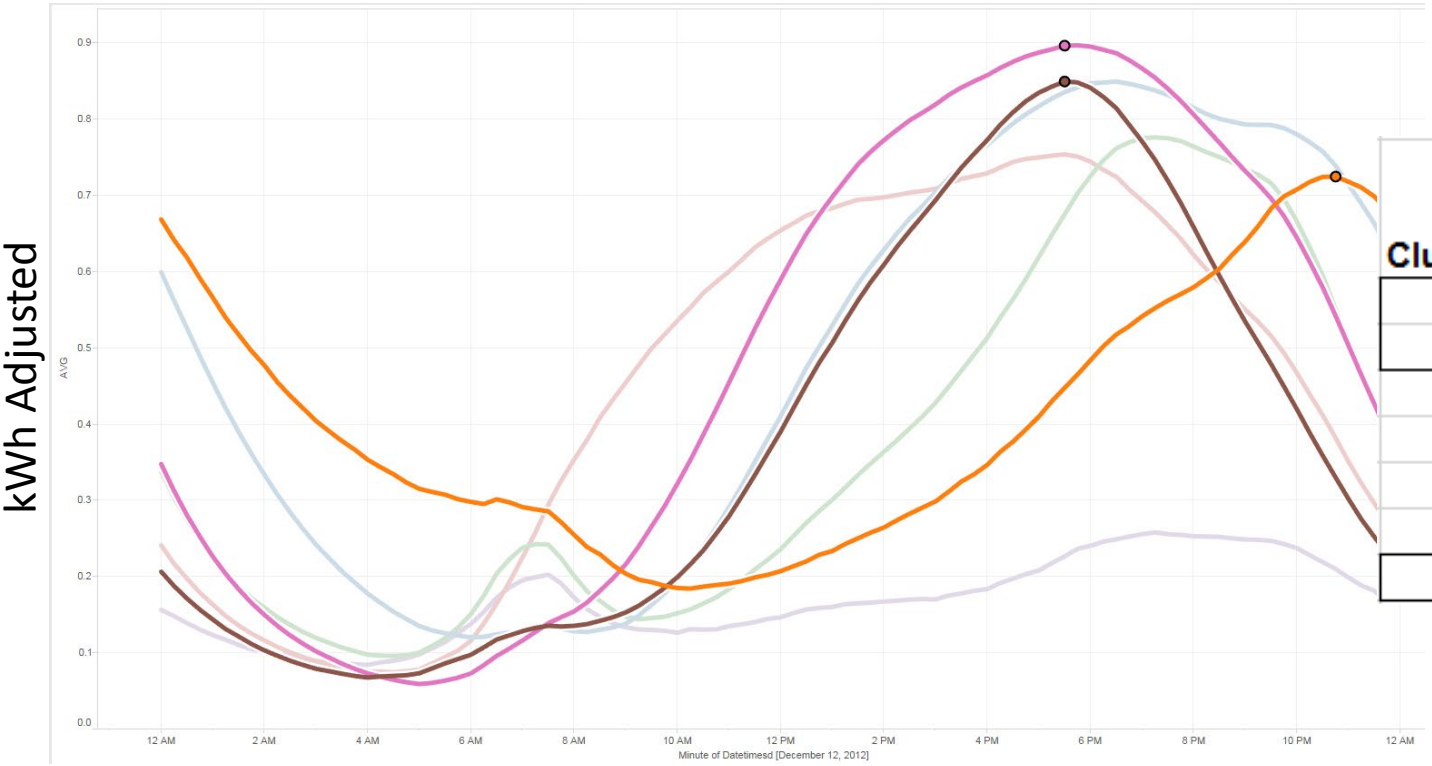


Implications and Possibilities

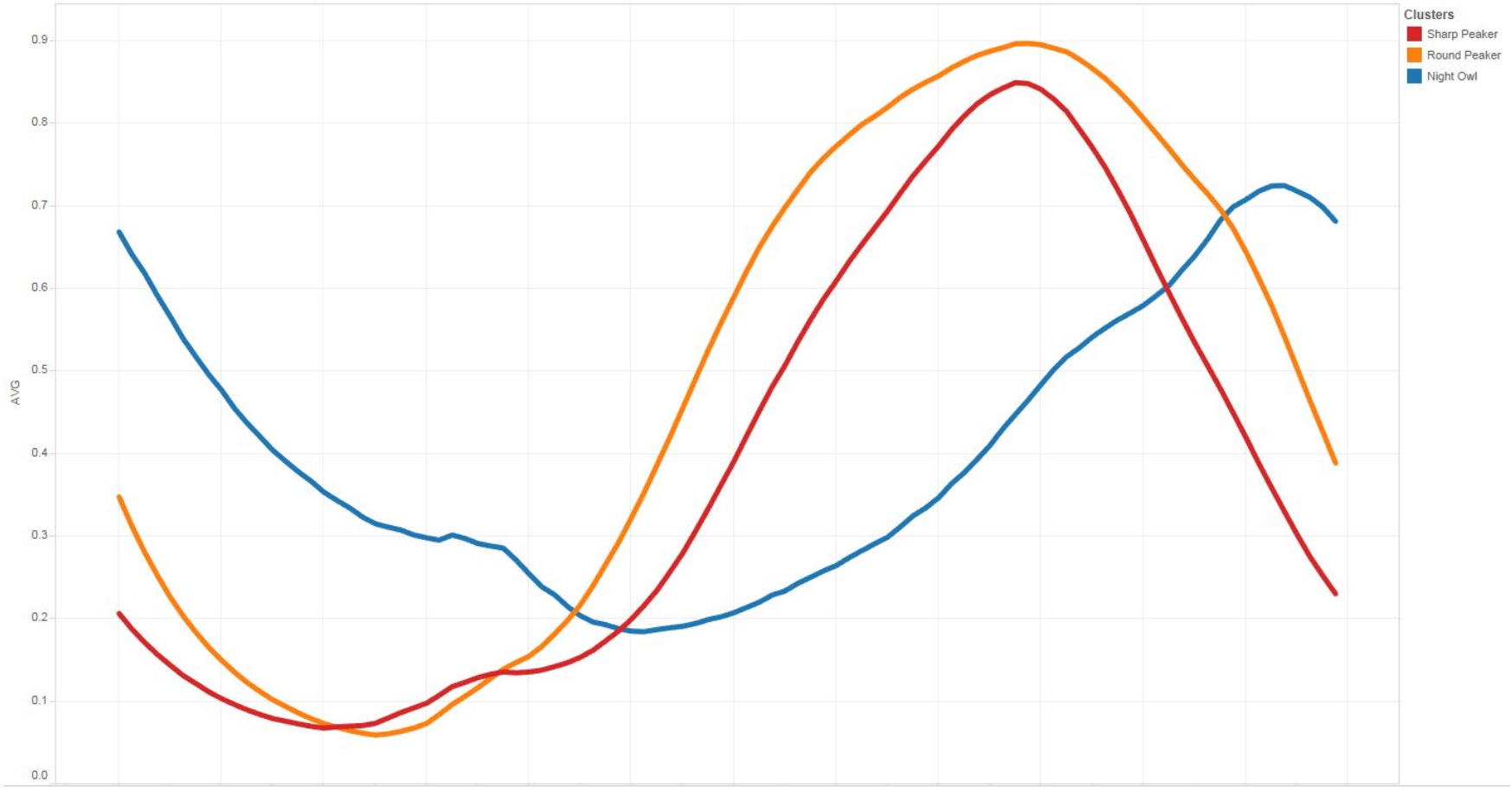
Residential – Peak Shaving



Cluster	Wholesale Cost % Difference from Lowest
6	21%
7	14%
3	11%
4	11%
1	9%
5	2%
2	0%

Implications and Possibilities

Residential – Customer Insights



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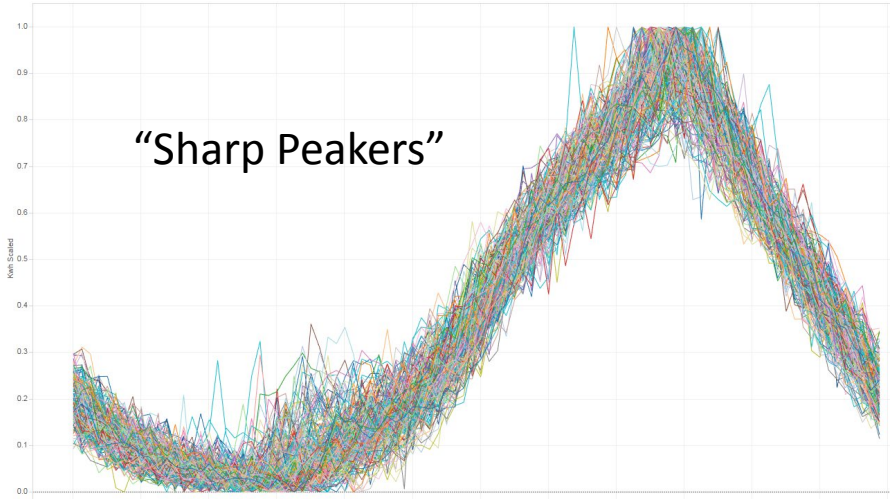

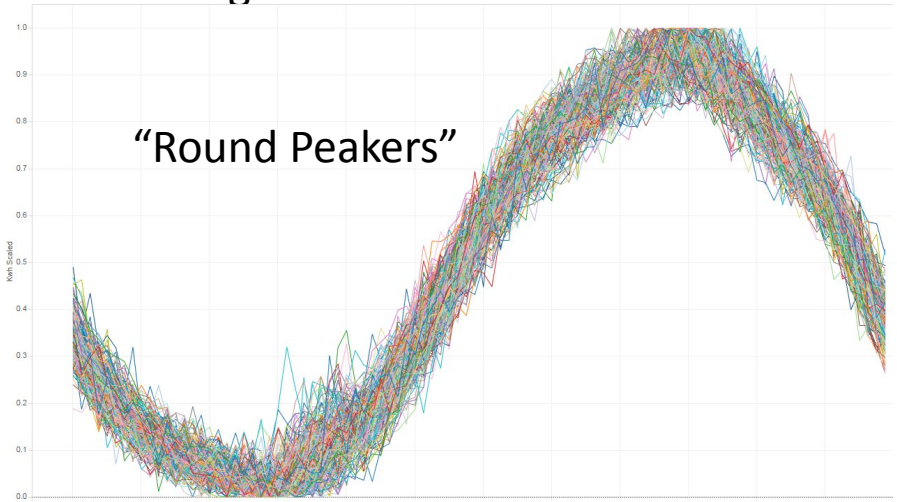

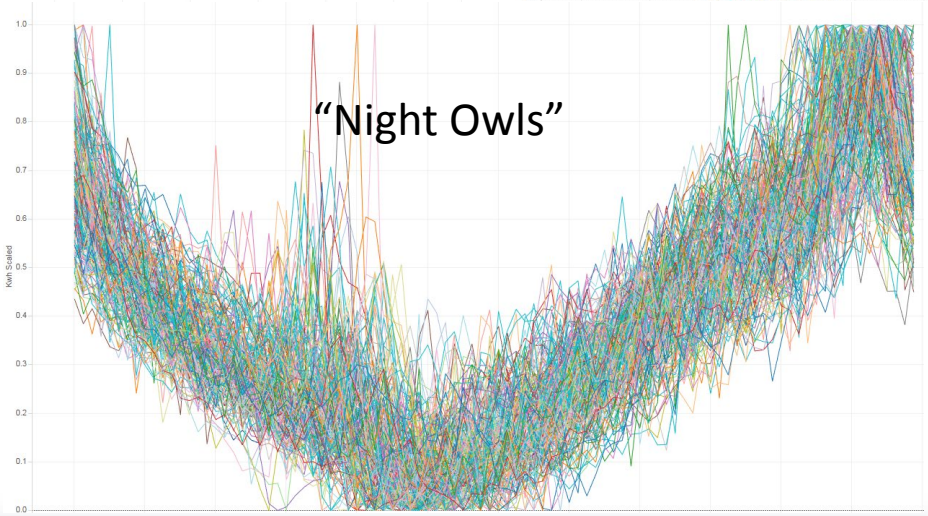

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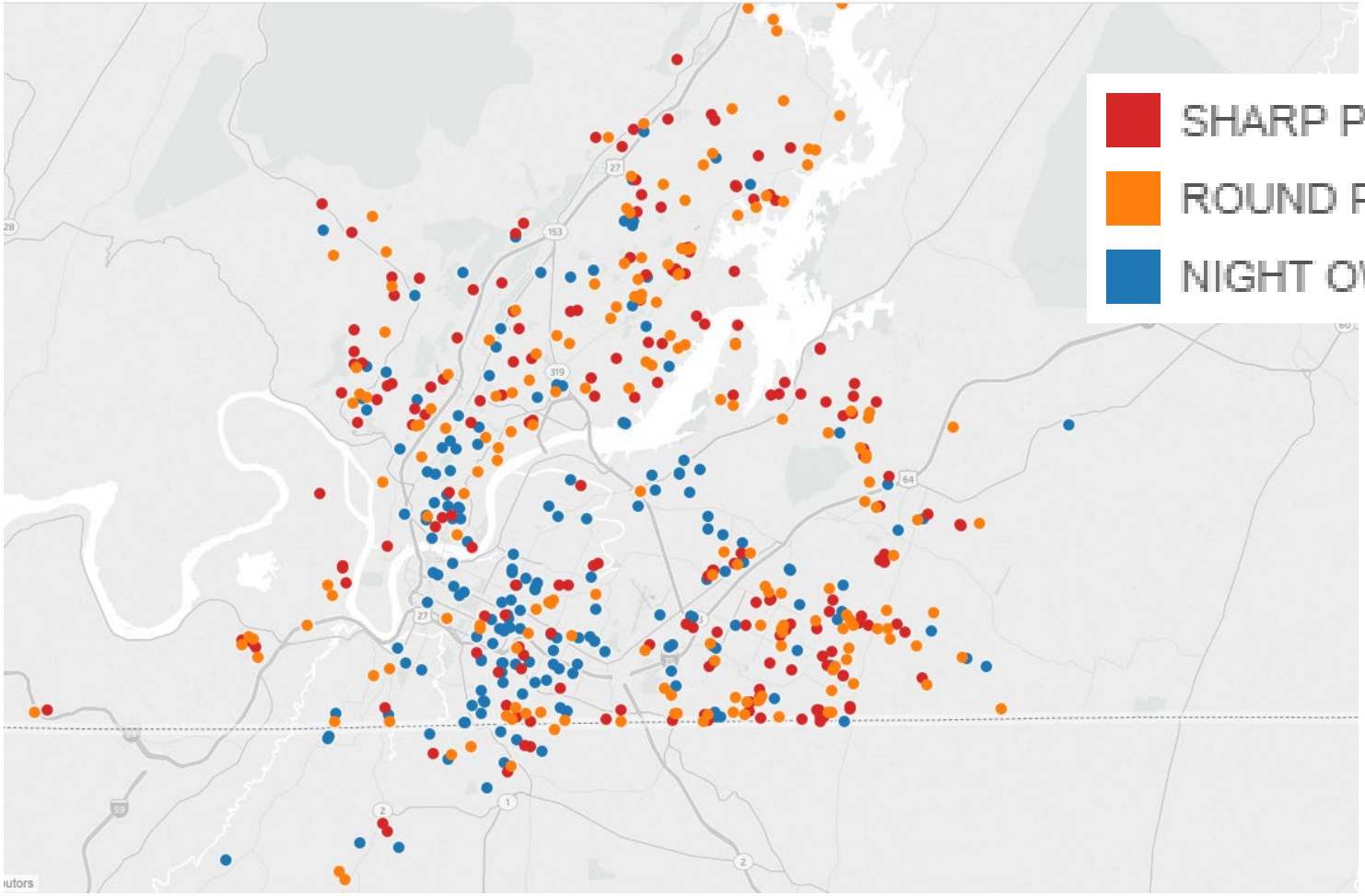


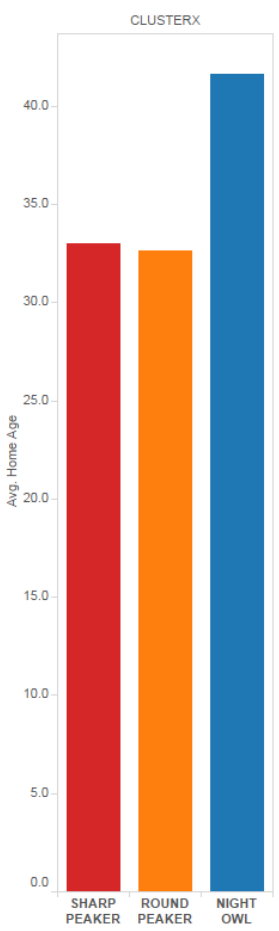
Implications and Possibilities

Residential – Customer Insights

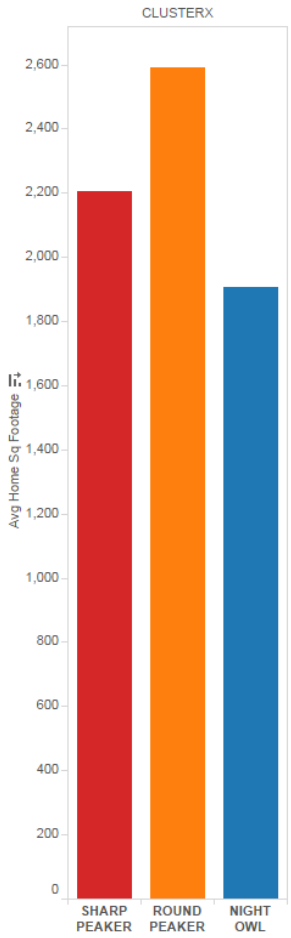
SHARP PEAKER

ROUND PEAKER

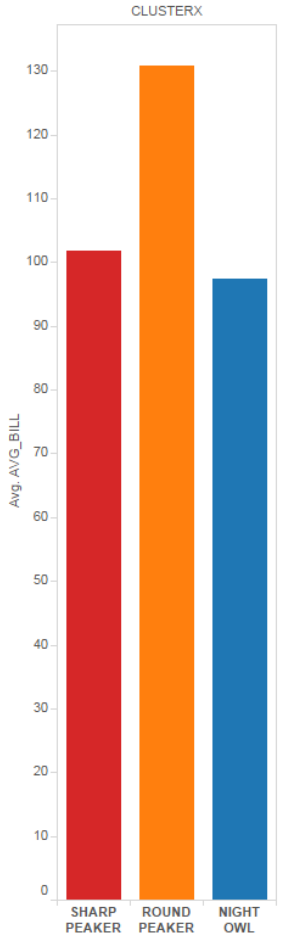
NIGHT OWL



Avg. Home Age



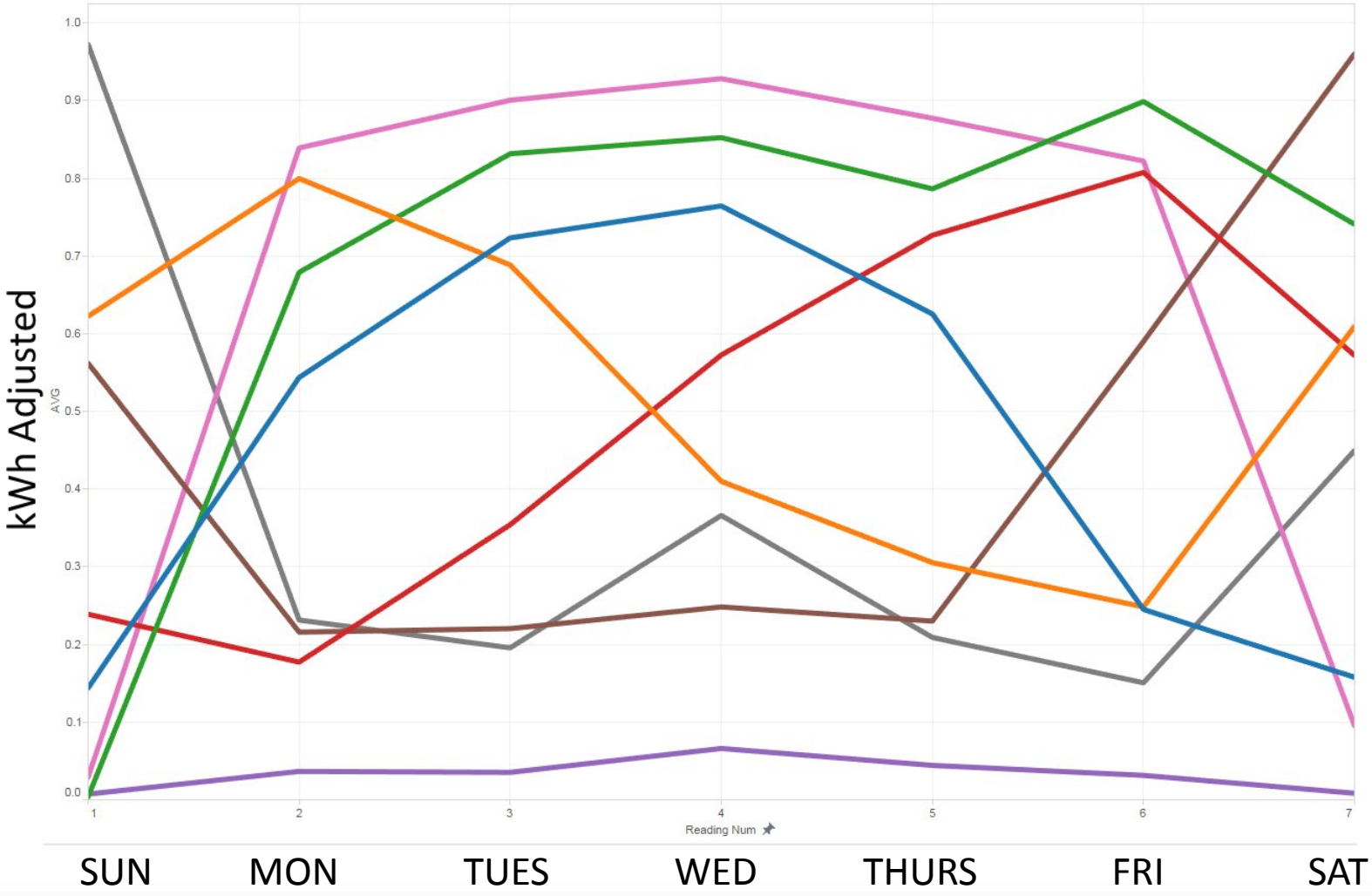
Avg. Home Size



Avg. Monthly Bill

Implications and Possibilities

Business – Business Type Identification



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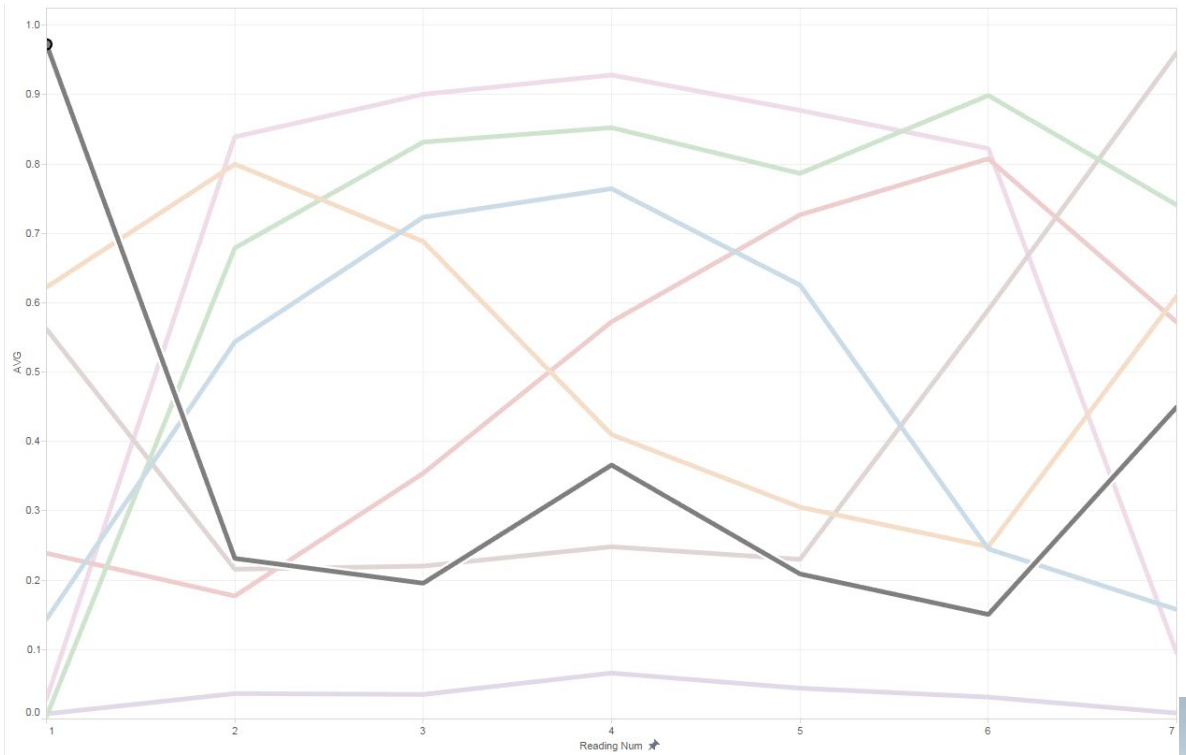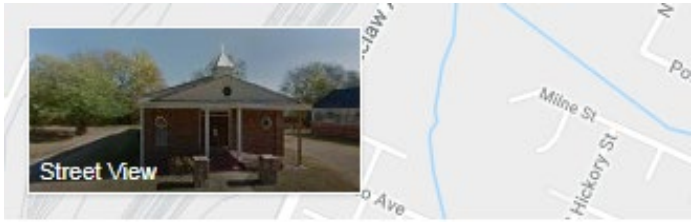
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