

## Project Description

Hello Client, I have outlined the project description and possible data analytical approaches we can take to address this issue. Please see all the details below and reach out if you have any questions. Thank you,  
Oretha

Client: Power Co: Utility: gas and electricity

- Low level of differentiation
- Customer service
- Keeping long-term customers
- Brand loyalty

Investigate drivers of customers switching to another service provider

- Customer Service
- Cost
- Quality of Product
- Brand Identity/Lack of Brand Loyalty
- Low differentiation

## Data Sources

- Customer Information
- Product Metrics
- Competitors Product Metrics
- The data frame should look like customer demographic (age, race, income, level of edu etc.), regional/territorial data (access to roads, type of houses construction), how they engage with the product (how much energy they use), how many time they have interacted with customer service lines(duration of call, satisfaction from ratings), Customer Surveys: what is important to customers, their views and options
- Exploratory Analysis:
  - Cluster Analysis,
  - look at the correlation of variables,
  - descriptive statistics on customer demographic data (summary of mean, median, stdv, 50% or 25% percentile,
  - look to see the cost of energy in the past and energy utilization over time,
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Business Problem:

- Customer Churn

Investigate Problem:

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Translate the Problem into DS one:

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Relevant Data

Modeling Approach:

- Cluster analysis
- Predictive Model; Churn or not Churn, Logistical Regression or Decision tree, Can use an ensemble Method like random forest or ada boost

How I would approach the outcome: evaluation