**Predicting customer churn for an energy services company**

Energy services companies in various countries offer services like infrastructure outsourcing, energy supply, financing and risk management. The client is such an energy services company providing household energy services and provided us with a data that contains the general info and usage patterns of 5000 households. The client wants to develop an attrition model to predict probability of churn of a given customer and extract underlying patterns.

**Data**

The data contains general user information such as age, education, family size etc., and specific information like the usage pattern, bill payment history, etc. The target is whether the customer churned out of the company. The attribute names are self-explanatory

**You will be evaluated based on the following:**

* Domain Understanding
  + Understand the domain and the problem with relevance to it
* Data preprocessing
  + Check for special characters, blank spaces etc.
  + Convert relevant attributes into numerics, factors, etc.
* Exploratory analysis
  + Explore underlying patterns of churn behavior
  + Come up with comprehensive visualizations that show the patterns
* Model Building
  + Apply ML algorithms to predict consumer churn
  + Use all the relevant classification algorithms that you have learnt so far
* Analyzing the results
  + Choose a relevant error metric for the defined problem. Justify
  + Report a table depicting the consolidated results of models built along with their train and test metrics
* Challenges/Further scope
  + Report challenges faced if any, and scope for further improvement
* Deliverables
  + Entire R code
  + Power point presentation
* Individual contribution to problem solving & individual performance during presentation