Recommended Information to share energy data with people

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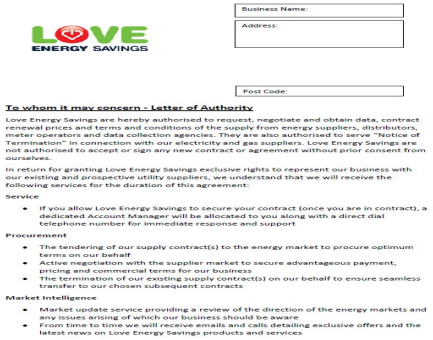


LOVE ENERGY SAVINGS

Business Name:

Address:

Post Code:

To whom it may concern - Letter of Authority

Love Energy Savings are hereby authorised to request, negotiate and obtain data, contract renewal prices and terms and conditions of the supply from energy suppliers, distributors, meter operators and data collection agencies. They are also authorised to serve "Notice of Termination" in connection with our electricity and gas suppliers. Love Energy Savings are not authorised to accept or sign any new contract or agreement without prior consent from ourselves.

In return for granting Love Energy Savings exclusive rights to represent our business with our existing and prospective utility suppliers, we understand that we will receive the following services for the duration of this agreement:

Service

- If you allow Love Energy Savings to secure your contract (once you are in contract), a dedicated Account Manager will be allocated to you along with a direct dial telephone number for immediate response and support

Procurement

- The tendering of our supply contract(s) to the energy market to procure optimum terms on our behalf
- Active negotiation with the supplier market to secure advantageous payment, pricing and commercial terms for our business
- The termination of our existing supply contract(s) on our behalf to ensure seamless transfer to our chosen subsequent contracts

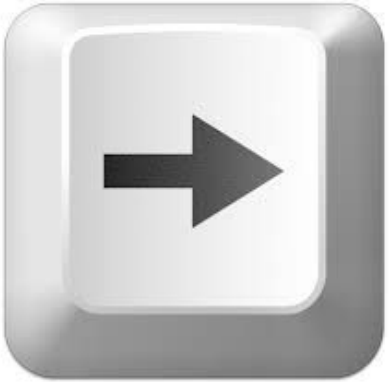
Market Intelligence

- Market update service providing a review of the direction of the energy markets and any issues arising of which our business should be aware
- From time to time we will receive emails and calls detailing exclusive offers and the latest news on Love Energy Savings products and services

Energy data can be:

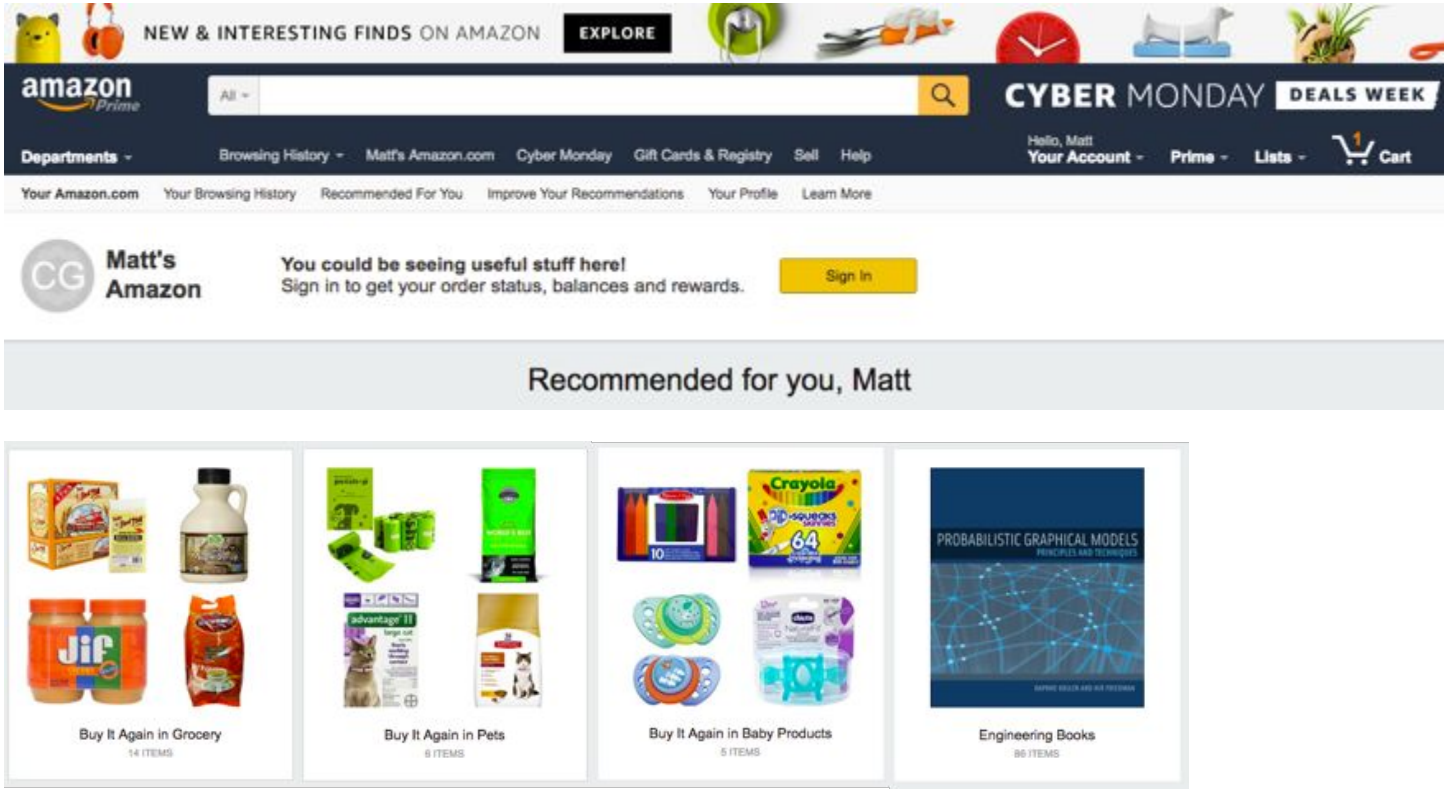
- PDF files from containing some informations related to energy
- any descriptive or inferential statistical report
- any news related to energy
- ...

Should we share all information related to energy data with all our customers?



Should we dedicate the related information to our clients?

Recommender Systems



Recommender Systems

Setup:

- Items:
  movies, songs, products, etc.
  (often many thousands)
- Users:
  watchers, listeners, purchasers, etc.
  (often many millions)
- Feedback:
  5-star ratings, not-clicking ‘next’,
  purchases, etc.

Key Assumptions:

- Can represent ratings numerically as a user/item matrix
- Users only rate a small number of items (the matrix is sparse)

	Doctor Strange	Star Trek: Beyond	Zootopia
Alice	1		5
Bob	3	4	
Charlie	3	5	2

Iñ finding a recommender system for sharing related information of Energy Data with people

- We do not have any rating system or historical information about their preferences
- We also do not have a list of items that we may share with each people

Therefore we need to construct a system taking into account the following.

1. Some information about each persons and its preferences in receiving the information related to Energy data
2. Classification of Energy data in some groups and send each group to the specific target

How we can collect the related data of each person and its preference in receiving a package of information of energy data?

1. What kind of information we have about people?
2. Should we send the energy data to people just based on geographical data or we need to send a package to each person separately?

Cluster of energy data

We may assume that the energy data are just TEXT files and use text mining techniques to find the relevant energy data for each person.

The classification table

	Energy data Topics A	Energy data Topics B	Energy data Topics C
Alice	?	?	?
Bob	?	?	?
Charlie	?	?	?

We may ask some simple questions from a customer that visit the website and then based on the answer recommend the specific energy data

Or based on the given information send the related daily, weekly, monthly, or annually energy data

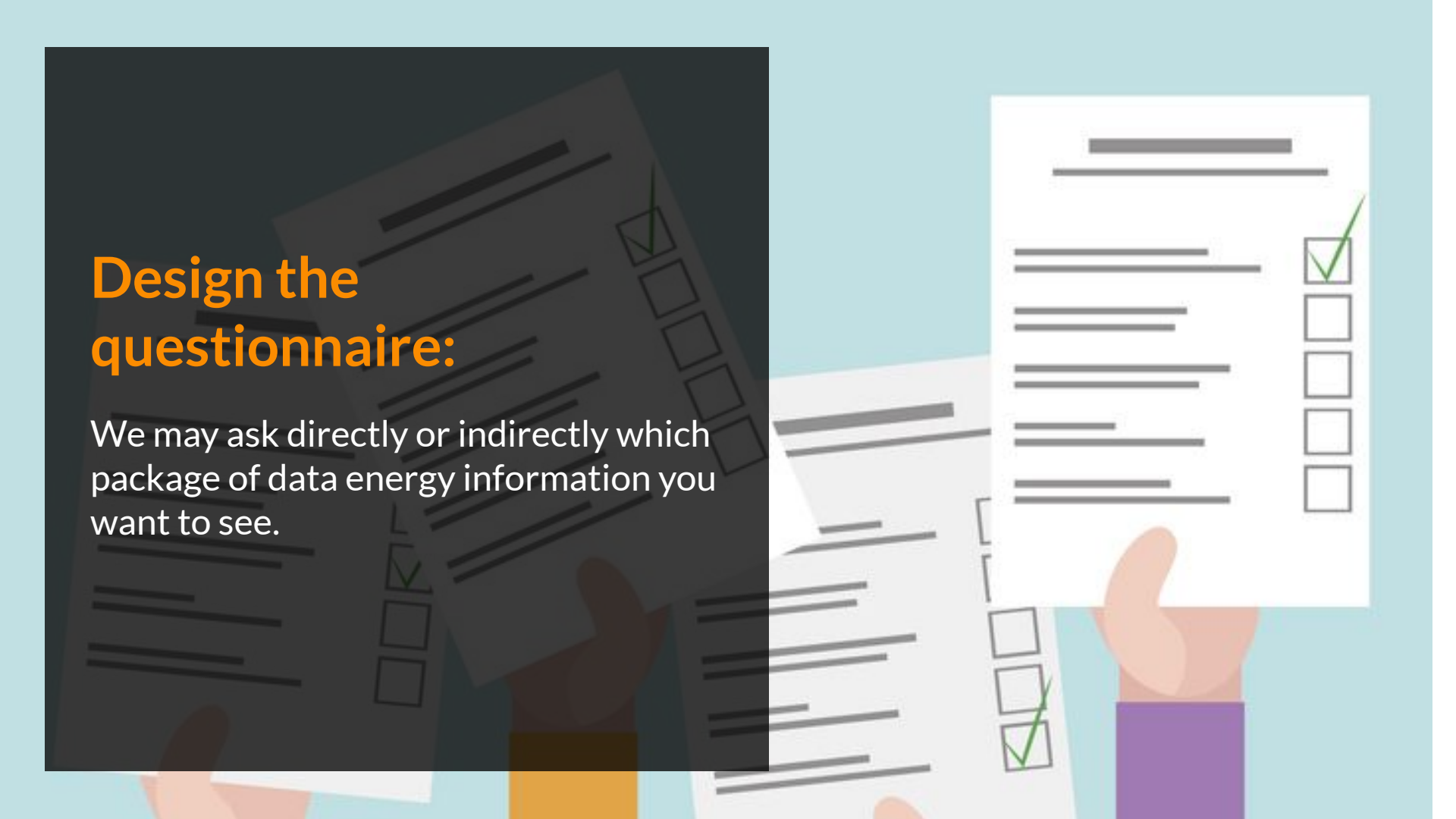
We first need to classify the text, for this purpose we may use one of the libraries in R or Python

Next

When we classify the text data we need to find the right information based on the answer to questionnaire.

Design the questionnaire:

We may ask directly or indirectly which package of data energy information you want to see.



Do we need Statistics?

If we ask question directly, we do not need any kind of statistical modeling.

But in a case of privacy information limitation or any other reasons such as stigmatizing characteristic, we can not ask direct question we may use indirect questions.

Text mining classification

There are many text mining methods available in Python and R. We can use the groundbreaking idea presented in the following paper

Blei D. M., Ng A. Y., and Jordan, M. (2003) Latent Dirichlet Allocation, JMLR.

to cluster the documents into different topics.

Since these kind of methods is not the novel idea of our project we decided to do not spend our time in classification of documents and instead we decided to improve our idea.

Conclusion

Instead of sharing all possible energy data with customers, we may share related data to users

We should design a new recommended system

Clustering of documents and estimate user's preference to each cluster

Thank you!

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