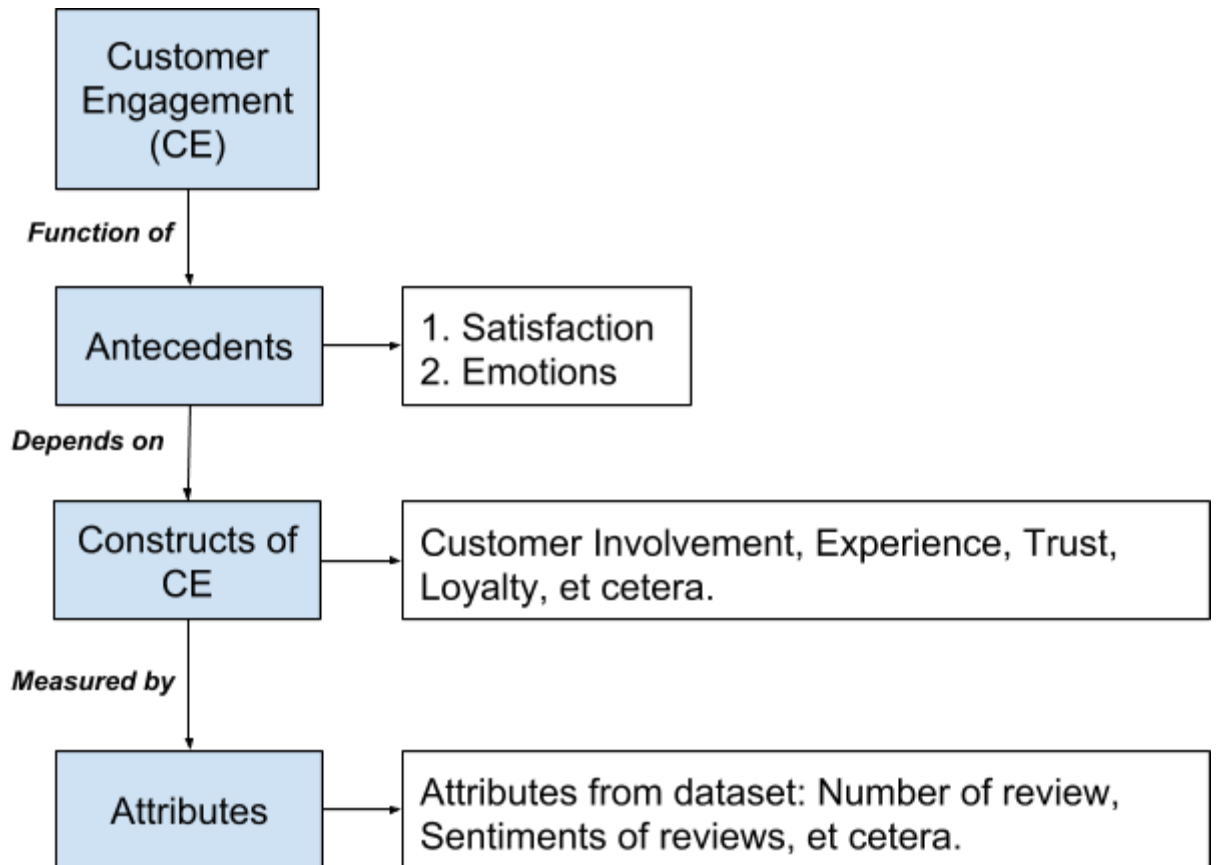


Customer Engagement Flow



Attributes from Dataset

- Datasets will be built up in categorical manner.
- Values of each attribute is in time series pattern.

Attributes (within timestep)

1. Number of reviewer
2. Price of products
3. Helpful
4. Ratings
5. Sales rank
6. Influence by related (Check through all product review and many dependent attributes)
7. No. of products in by related
8. Number of holidays
9. Reviewer experience
10. Gender
11. Week
12. Day
13. Year
14. Month
15. Brand scale
16. Appeal
17. Number of reviews
18. Sentiment + review + price + ... (All combinations for constructs)
19. Cheap/Reasonable/Expensive [Also Luxury/Necessity]
20. Location?
21. Merchandise
22. Public support/Advocacy
23. Customer experience through all reviews for money, and diff. Perspective
24. Useful to whom: Men, Women, Or both
25. No. of products

Constructs of CE

1. Customer Involvement :

We are Getting following things after they wrote review and all the below things are about the time of purchase they possess.

Importance: Is it necessity or luxury? Also acc. to their money experience.

- Money spent on past experiences
- Product lies in which category of price
- Find product is luxury or necessity

Relevance: Check: Is they buy same kind of products? Use Influence by related.

- Check past purchases lies in by related. Even think about fav brand, category and then check relevance

Value: Price, Cheap/Reasonable/Costly

- Category Wise price in three class.

Excitement: Not easily identify

Want: Only think about at looking data.

Needs: Only think about at looking data.

Appeal: Using Appeal. Attractive or not?

- Attractive?

Benefits: Probably from all review about product. Overall, helpful.

- One scale: Review/rating/helpful altogether

Interests: Sales Rank by category

2. Customer Experience :

Sensorial: Sentiment analysis + review + price...

Emotional: Sentiment analysis + review + price...

Cognitive: Sentiment analysis + review + price...

Pragmatic: Sentiment analysis + review + price...

Lifestyle: Customer experience [money & purchase]

Relational:

Promotion:

Price: Price, cheap/Reasonable/Costly

Location:

Merchandise: No. of reviews/reviewers

3. Customer Satisfaction :

Buying again: Did he/she buy again?

- Check: Did they buy again?

Referral: Review, rating

- Ratings

Social media talk:

Feedback:

- Those are same as review and ratings

4. Customer Loyalty :

Repeated purchase: Brand loyal / Product loyal

- Find same brand purchases

Favorable brand: Favourite brand

- Find fav. Brand in each categories/subcategories

Attitude: Review/rating towards brand

- Review/rating towards brands

5. Customer Trust :

Attitude towards brand: Same as Loyalty

6. Customer Commitment :

Time & Money Spending: Money involved in all purchases, Time of first to last purchase

- Total money spend in purchases
- First to last purchase time period

7. Customer Brand value :

Awareness: No of reviewer in particular brand

- No. of reviewer in all brands in which reviewer had bought

Image: More Rating/+ve Review in particular brand

- No. of ratings given
- How many positive ratings in each brand

Trust: No. of Reviewer buy from same brand

- No. of +ve review in all brands in which reviewer had bought

Affect:

Intention:

Advocacy:

Price: Cheap/Reasonable/Costly

- Categorize the price

Dataset

- Find product is luxury or necessity?
- Appeal: Attractive?
- Find Mr. X fav. Brand, category, and subcategory.
- Does related bought by Mr. X?
- Does related brand is Mr. X fav. Brand?
- Does related category is Mr. X fav. category?
- Does related subcategory is Mr. X fav. subcategory ?
- Rank Brands in each categories/subcategories via rating, reviews, ...
- Rank products in each brand via rating, reviews, ...
- Rank products in each categories/subcategories via rating, reviews, ...
- Rank Customers via rating, reviews, ...

Mr. X current review about a product

- No. of times Mr. X wrote review in this product
- Sentiment of review (+ve/-ve)
- No. of people reacted to review
- helpfulness of review
- Rating of review
- Is it favourite brand?
- Is it favourite category?
- Is it favourite subcategory?
- Does related bought by Mr. X?
- Does related brand is Mr. X fav. Brand?
- Does related category is Mr. X fav. Category?
- Does related subcategory is Mr. X fav. subcategory ?
- Rank of Brands of product P
- Rank products P in brand
- Rank products P in categories/subcategories
- Rank of Customer

Product's all details that currently Mr. X looking

- No. of reviews for given product
- No. of +ve/-ve review
- No. of people reacted to +ve/-ve review
- No. of helpful review

- Overall Rating for all given reviews in particular product
- Price scale of product
- How influential by related products
- No. of products in related
- Overall, category wise, subcategory wise sale rank
- how many times people buy repeatedly?
- First & last purchase time of this product?
- PRODUCT'S BRAND:
 - No. of products in brand of product P
 - No. of reviews in product's brand
 - No. of +ve/-ve review in product's brand
 - No. of people reacted to +ve/-ve review in product's brand
 - No. of helpful reviews in product's brand
 - Rating in product's brand
 - Price scale of all products of this brand
 - How influential by related products
 - No. of products in related
 - Sale rank using all products of this brand
 - how many times people buy this brand's products repeatedly?
 - First & last purchase time of this brand?

Mr. X current product sub-category

- No. of reviews for given product's sub-category
- No. of +ve/-ve review for given product's sub-category
- No. of people reacted to +ve/-ve review for given product's sub-category
- No. of helpful review for given product's sub-category
- Overall Rating for all given reviews in particular product's sub-category
- Price scale of product's sub-category
- How influential by related products
- No. of products in related
- Overall, category wise sale rank
- how many times people buy repeatedly?
- First & last purchase time of this product?
- FAV. BRAND:
 - No. of products in brand of product P
 - No. of reviews in product's sub-category brand
 - No. of +ve/-ve review in product's sub-category brand
 - No. of people reacted to +ve/-ve review in product's sub-category brand
 - No. of helpful reviews in product's sub-category brand

- Rating in product's sub-category brand
- Price scale of product's sub-category brand
- How influential by related products
- No. of products in related
- Sale rank using all products of this brand
- how many times people buy sub-category brand's products repeatedly?
- First & last purchase time of this sub-category?

Mr. X current product category

- No. of reviews for given product's category
- No. of +ve/-ve review for given product's category
- No. of people reacted to +ve/-ve review for given product's category
- No. of helpful review for given product's sub-category
- Overall Rating for all given reviews in particular product's category
- Price scale of product's category
- How influential by related products
- No. of products in related
- Overall sale rank
- how many times people buy repeatedly?
- First & last purchase time of this product category?
- FAV. BRAND:
 - No. of products in brand of product P
 - No. of reviews in product's category brand
 - No. of +ve/-ve review in product's category brand
 - No. of people reacted to +ve/-ve review in product's category brand
 - No. of helpful reviews in product's category brand
 - Rating in product's category brand
 - Price scale of product's category brand
 - How influential by related products
 - No. of products in related
 - Sale rank using all products of this brand
 - how many times people buy category brand's products repeatedly?
 - First & last purchase time of this category?

Reviewer details

- No. of reviews written by reviewer
- How +ve/-ve reviews written by reviewer
- No. of people reacted to +ve/-ve reviews written by reviewer
- No. of helpful review written by reviewer

- Rating written by reviewer
- Price scale written by reviewer
- How influential by related products written by reviewer
- No. of products in related
- What's Sale rank written by reviewer
- Buy again?
- First & last purchase time?
- FAV. BRAND:
 - No. of products in brand of product P
 - No. of reviews
 - How +ve/-ve review
 - No. of reacted to +ve/-ve review
 - No. of helpful reviews
 - Rating
 - Price scale
 - How influential by related products
 - No. of products in related
 - What's Sale rank
 - Buy again?
 - First & last purchase time?

Related

- Find products in related, and find price of those products, customers also viewed and get price scale
- Find products in related, and find no. of reviews
- Find products in related, and find how many +ve/-ve reviews
- Find products in related, and find how many reacted to +ve/-ve review
- Find products in related, and find ratings
- Find products in related, and find how helpful
- Find products in related, and find salesrank in category
- Find products in related, and find buy again?
- Find products in related, and find first & last purchase time?
- Find products in related, and find price of those products, customers also bought and get price scale
- Find products in related, and find no. of reviews
- Find products in related, and find how many +ve/-ve reviews
- Find products in related, and find how many reacted to +ve/-ve review
- Find products in related, and find ratings
- Find products in related, and find how helpful

- Find products in related, and find salesrank in category
- Find products in related, and find buy again?
- Find products in related, and find first & last purchase time?
- Find products in related, and find price of those products, customers bought together and get price scale
- Find products in related, and find no. of reviews
- Find products in related, and find how many +ve/-ve reviews
- Find products in related, and find how many reacted to +ve/-ve review
- Find products in related, and find ratings
- Find products in related, and find how helpful
- Find products in related, and find salesrank in category
- Find products in related, and find buy again?
- Find products in related, and find first & last purchase time?

P1: There is a positive relationship between customer satisfaction and that customer's direct contribution.

P2: The impact of satisfaction on direct contribution will be enhanced in the service (vs. products) industry.

P3: The impact of satisfaction on direct contribution of the consumer will be enhanced for a B2B firm (vs. B2C firm).

P4: The impact of satisfaction on direct contribution of the customer will be enhanced for products with low involvement.

P5: The impact of satisfaction on direct contribution of the customer will be enhanced for a firm with low brand value.

P6: The impact of satisfaction on direct contributions of the customer is enhanced by the level of convenience that the firm provides to its customers.

P7: The higher the level of positive emotions of the customer towards the brand, the higher will be the indirect contribution of the customer.

P8: The impact of emotions on indirect contributions of the customer will be enhanced in the service industry.

P9: The impact of emotions on indirect contribution of the customer will be enhanced for a B2C firm (vs. B2B firm).

P10: The impact of emotions on indirect contributions of customers will be enhanced for a higher involvement product/service.

P11: The impact of emotions on indirect contribution of the consumer will be enhanced for a firm with higher brand value.

P12: The impact of emotions on indirect contributions of the customer is enhanced by the higher level of convenience that the firm provides to its customers.

P13: The higher the customer's engagement (direct and indirect contribution), the higher will be his/her probability to

- (a) opt in to the firm's marketing program,
- (b) provide the firm access to his/her personal information, and
- (c) enable the firm to provide relevant marketing communication.