NIKE Business Proposal

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How to enhance customer loyalty/retention through an E-commerce marketing strategy?

- Which canal of data do we use? Why?
- Define customer: What is our customer portrait? In other words, what is the gender, age, geolocation distributed?
- What is the most popular feature based on age range, gender, etc?
- What is the purchase ability range? In other words, which customers purchase the highest, based on gender, with different age range and geolocation?
- What does the reviews tell us about our product?

Addressing these questions, we will be providing following useful insights to NIKE:

- ***Which canal of data do we use? Why?***

	E-Commerce Sales	**Traditional Retail Sales**
Pros	• Microeconomic aspects about consumer- Keeping in contact with customers is easier. • Eliminates the need for physical stores and partnerships • Customer demographics data • Business can save money on rent, utilities, maintenance	• Easy to fetch competitors' data • Try before you buy
Cons	• No information about competitor • Very expensive to buy competitor's data for analyses • Security Risks	• Expensive - You have to spend money on electricity, rent, facilities etc. • Difficult to analyze and implement data analytics • No insights about customer preference data. • Missing customer demographics data

- ***Define customer: What is our customer portrait?***

To offer the best product/services, it is essential to understand who our customers are, which age group do they belong to, what the categories they like. To do it, we have to gather as much information as you can about them, so that we are able to modify and enhance our products and marketing strategies accordingly. We can design our marketing and sales strategies by dividing our customers into the following categories:

New Client: Create an account with the new customer(online/offline), so that we are able to track their purchases, likes/dislikes accordingly. Another benefit of creating an online account for new clients is that no extra money is spent on collecting customer information.

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Occasional client: Customers who are visiting stores irregularly, and just looking for specific items from Nike.

Regular Client: Loyal customers who shop at Nike regularly, and purchasing a wide variety of items time after time are a part of this category.

Dead client: Customers who used to be a Regular/Occasional client, but have shifted to another brand and have stopped purchasing from NIke would be a part of this category.

Online clients act differently. Some of them will think multiples times before buying. Others, will spend $X in a short time. Each behavior is unique nevertheless it can be segmented by similitude. So, especially for Business to Consumer(B2C), we must segment all the user profiles.

- ***What is the most popular feature based on age range, gender, etc? What is the purchase ability range? In other words, which customers purchase the highest, based on gender, with different age range and geolocation?***

In our case, we first define the type of our client by their respective age groups, categories of shoes they are interested in, they prefer online/offline shopping. We can collect more data about our online customers by associating them with their respective accounts, looking at their buying trends, frequencies, etc.

The benefits of building a customer portrait is to adapt our strategy for each of them, providing the service that corresponds to their needs. For example, a new sign up you can offer a discount of X% as a welcome gift, or with an occasional client send him new letters in a specific period of time to push him to consume.

Moreover, the data collection about clients does not limit to categorize their type. We will be collecting classic (name, email) and personal (favorite sport) data that related to your business. Gender, age and localization are primordial in your client's knowledge (if they are agreed to share it). With this information, we will be able to communicate easily with them, anticipate their demand, and improve our service thereby investing in a long lasting relationship.

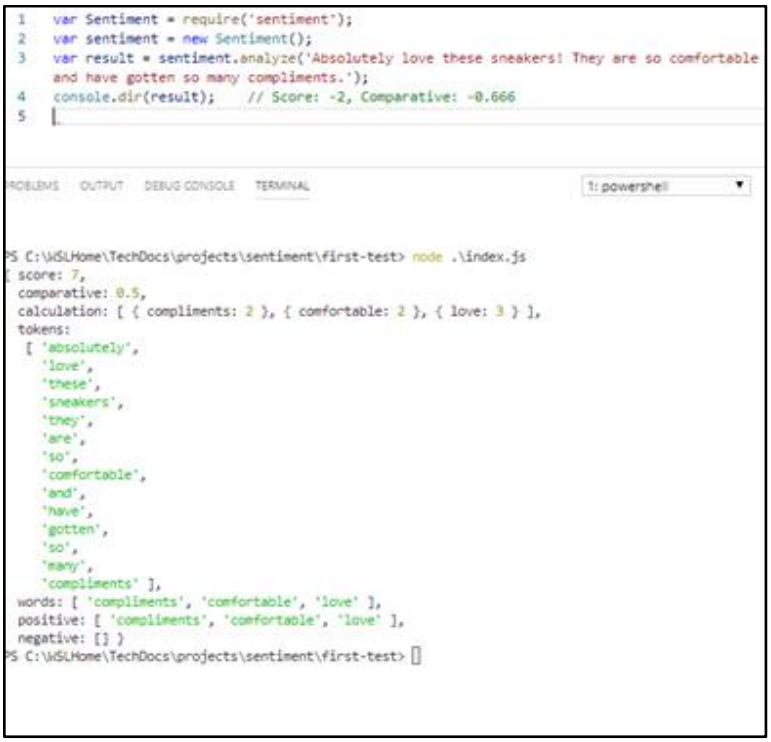
- ***What does the reviews tell us about our product?***

After purchasing a product, clients always got the possibility to evaluate their goods and user experience. By collecting this data, the company still to analyze it. Not only understand what they should correct but also what they can improve.

To evaluate the reviews, we can employ **sentiment analysis** refers to the use of natural language processing, text analysis, computational linguistics, and biometrics to systematically identify, extract, quantify, and study affective states and subjective information. Through an algorithm, we interpret the word in either positive(+a) or negative(-a) meaning. Then we are able to get a final score (0 to 10) and rank them. Also, to make it more efficient, the grade has to be associated with its number of views, estimating its influence on other clients. A product, that got a rank of 10 but has been seen by few people may not affect the consumers. Contrary to a rank of 5, with thousands of views, has a greater impact.

The benefits of the analysis of the review are to assess our different processes and product with the opinion of consumer s. Consumer satisfaction can always be improved. Hence, the company strategies will be corrected, adjusted, enhanced or canceled. Finally, if we observe a positive effect with this review

analysis from our website. We will spread it on a higher level, through different canals. That means we can take the product's review from other websites(Amazon), interact with social media. For example, an influencer put a picture of its new shoes, we would analyze the number of views, likes, and comments.



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We are recommend procuring the following types of data for our analyses:

Type of Data	Advantages
Customer Data	Customer Data will help us identify our customers - where are they majorly from, which age group they fall under, which categories of shoes do they prefer, etc. We can design customer centric campaigns accordingly.
Product Data	Product Data would help us analyze which are our best selling products, who buys them the most, what marketing strategies can we use to boost sales.
Categorical Data	We can use the categorical data to determine which are the categories that are most popular amongst our customers, so that we are able to showcase them to boost our sales.
Social Media Data	Social Media Data and migration of offline data to online platforms can come in very handy when we want to analyse customer likes/dislikes, success/failure of marketing campaigns, customer shopping trends, etc.
Address Data	Address Data is very useful in determining the geographical trends and customer availability in various regions. Analyzing the address data along with Customer and Transaction data would help us identify the new opportunities in the market.
Review Data	Customer Reviews and feedback are one of the most important things that determine the success and failure of a product. Gathering review data from different online platforms would help us service our customers better and modify our products as per their demands. It would also help us to identify which products would be suitable for different markets.
Transactional Data	Transactional Data is the key to identify which are our best selling products. Analyzing the Transactional Data, Customer Data along with Address Data can help us answer questions like what age groups are our major customers? Which geographical locations can we expand to? What is the purchase ability range? In other words, which customers purchase the highest, based on gender, with different age range and geolocation?

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The above mentioned datatables will need to have specific attributes to answer NIKE's business questions. We have explained in detail each attribute of datatable and their procurement path.

Customer Data

Attributes Name	Explanation	Procured through
CustomerID	Customer has unique id	Nike Customer Database/ Dic's Sporting Customer Database
FName	Customer First Name	Offline/Online account information
LName	Customer Last Name	Offline/Online account information
Gender	Gender of Customer	Offline/Online account information
DOB	Date of birth of customer	Offline/Online account information
CustomerStatus	Shows customer status like "student'	Nike Customer Database/ Dic's Sporting Customer Database
Email	Email address	Offline/Online account information
Contact	Primary phone number of customer	Offline/Online account information
State	Localisation	Offline/Online account information
ZIP	Digital localisation	Offline/Online account information
City	City name	Offline/Online account information
Country	Country of customers live	Offline/Online account information

MediaType

Attributes Name	Explanation	Procured through
SocialMediaType	IDs for different types social media	Nike Online Customer Database/ Online Account Information
SocialMediaName	Name of different kinds of social media	Nike Online Customer Database/ Online Account Information

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Social Media Data

Attributes Name	Explanation	Procured through
SocialMediaID	SocialMedia has unique id	Nike Online Customer Database
SocialMediaURL	Unique Usernames for each Social Media Platform	Nike Online Customer Database/ Online Account Information
SocialMediaRating	SocialMediaType has unique id	Nike Online Customer Database
Followers	Number of followers	Nike Online Customer Database/ Online Account Information

AddressBook

Attributes Name	Explanation	Procured through
AddID	AddressId for different address	Nike Customer Database/ Dic's Sporting Customer Database
AddCategory	Different category of address, e.g. home, company	Nike Customer Database/ Dic's Sporting Customer Database
AddName	Name of the receiver	Nike Customer Database/ Dic's Sporting Customer Database
AddLine	Address of customer	Nike Customer Database/ Dic's Sporting Customer Database
AddZip	ZipCode of address	Nike Customer Database/ Dic's Sporting Customer Database
AddCity	Address of the consumer	Nike Customer Database/ Dic's Sporting Customer Database
AddState	Name of the State	Nike Customer Database/ Dic's Sporting Customer Database
AddCountry	Name of the country	Nike Customer Database/ Dic's Sporting Customer Database
ShipEmail	Email of receiver	Nike Product Delivery Database
ShipContact	Shipping contact information	Nike Product Delivery Database

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Product

Attributes Name	Explanation	Procured through
ProductID	Product has unique ID	Nike Product Online/Offline Database and Dick' Sporting Product Data
ProductName	Name of the product	Nike Product Online/Offline Database and Dick' Sporting Product Data
Price	Price of the product	Nike Product Online/Offline Database and Dick' Sporting Product Data
Size	Size of the product	Nike Product Online/Offline Database and Dick' Sporting Product Data
Color	Color of the product	Nike Product Online/Offline Database and Dick' Sporting Product Data
ReleaseDate	When you start produce it	Nike Product Online/Offline Database and Dick' Sporting Product Data
EndDate	When product is not produced anymore	Nike Product Online/Offline Database
Surface	The texture of the shoe material	Nike Product Online/Offline Database
Edition	The model/limited editions etc.	Nike Product Online/Offline Database
ShoeType	Gender cloth(Man/Woman/Unisex)	Nike Product Online/Offline Database

Category

Attributes Name	Explanation	Procured through
CategoryID	Category has unique ID	Nike Product Online/Offline Database and Dick' Sporting Product Data
CategoryName	The type of product	Nike Product Online/Offline Database and Dick' Sporting Product Data

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Reviews

Attributes Name	Explanation	Procured through
ReviewID	Review has a unique ID	Nike Product Online/Offline Database and Dick' Sporting Product Data
SocialMediaID	SocialMedia has unique ID	Nike Customer Database/ Dic's Sporting Customer Database
RatingScores	Grade of the comment, according to a sensitive analysis	Nike Product Online/Offline Database and Dick' Sporting Product Data
NumberView	Number of client who saw the post	Nike Customer Database/ Dic's Sporting Customer Database

Transactions

Attributes Name	Explanation	Procured through
TransactionID	TransactionID for every transaction	Nike(Online/Offline) Transactional Database/ Dick's Sporting Transactional Database.
Quantity	Number of product	Nike(Online/Offline) Transactional Database/ Dick's Sporting Transactional Database.
Date	Date of the transaction	Nike(Online/Offline) Transactional Database/ Dick's Sporting Transactional Database.
Price	Amount for a product	Nike(Online/Offline) Transactional Database/ Dick's Sporting Transactional Database.

We have developed the database schema based on relational schema using the below tables, that will help us in addressing important business questions.

- **Customer**(CustomerID, FName, LName, Gender, DOB, CustomerStatus, City, State, Zip, Country, Email, Contact)
- **Product**(ProductID, *CategoryID,* ProductName, Price, Size, Color, ReleaseDate, EndDate, ShoeType, Surface, Edition)
- **Category**(CategoryID,CategoryName)
- **SocialMedia**(SocialMediaID, SocialMediaURL, *SocialMediaType*, SocialMediaRating, Followers)
- **MediaType**(SocialMediaType, SocialMediaName)
- **Review**(ReviewID,*CustomerID, ProductID*, *SocialMediaID*, RatingScores, NumberView)
- **AddressBook**(AddID, *CustomerID*, AddCategory, AddName, AddLine, AddCity, AddState, AddZip, AddCountry, ShipEmail, ShipContact)
- **Transaction**(TransactionID, *CustomerID, ProductID, AddID*, Quantity, Date, Price)

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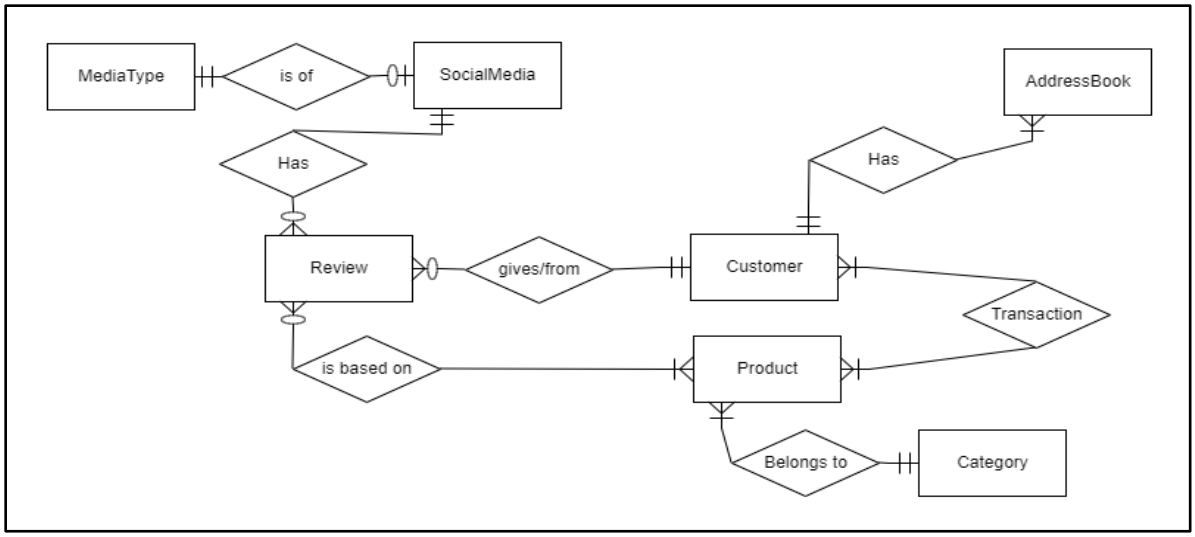
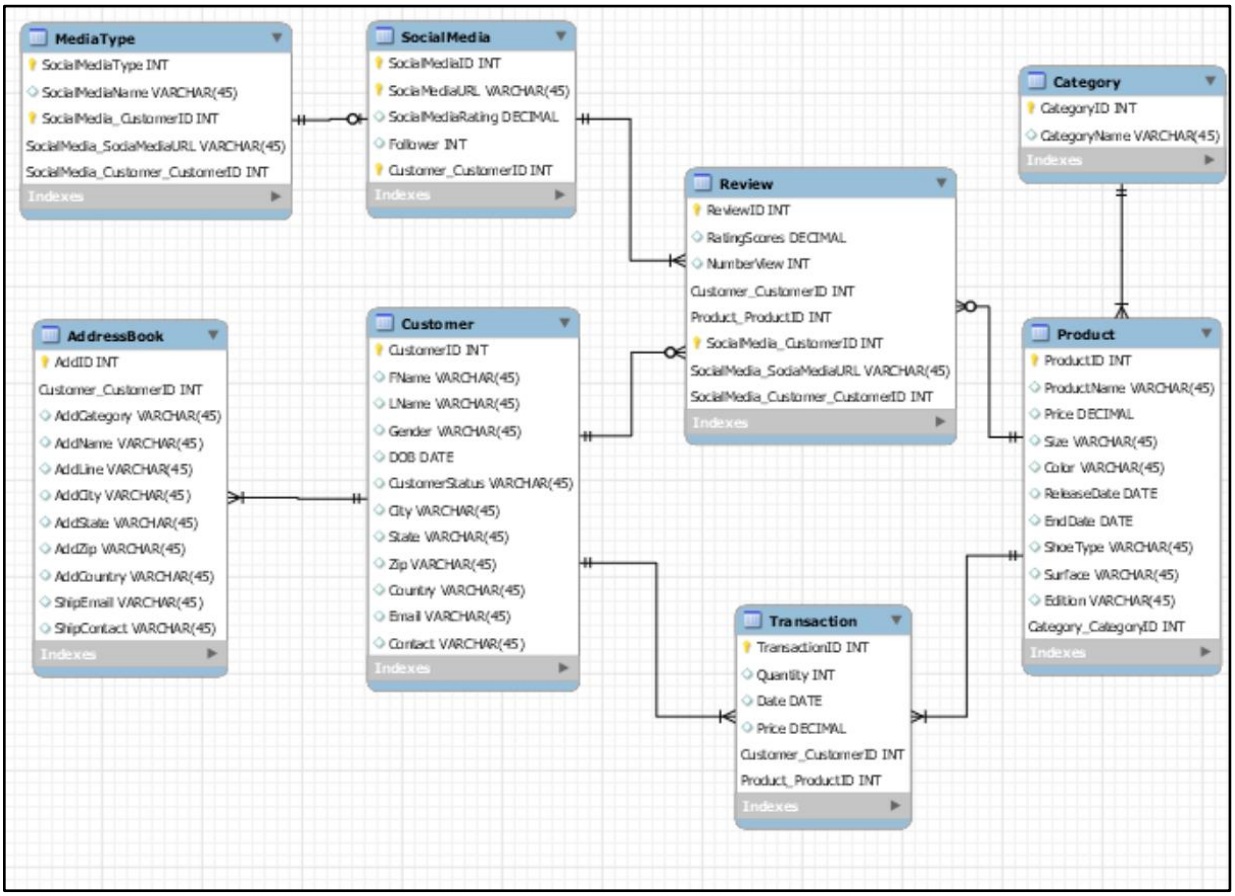
Entity-Relationhip Diagram



MySQL Database Schema



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Based on the above schema, below are the sample queries that will help us in addressing the questions.

1. **For defining the loyalty of customer,**

```
select
case when order_total = 1 then 'Buy once'
      when order_total <= 10 then 'Occasional buyer'
      else 'Regular buyer'
end as Customer_status,
count(CustomerID) as Customer_count
from
        (
        select CustomerID, count(TransactionID) as order_total
        from Transaction
        group by 1
        )a
group by 1;
```

2. **Understand which products are trending and which are not based on customer ratings and viewership in a particular year.**

```
select C.City, count(C.CustomerID) as TotalCustomers, avg(R.RatingScores) as Average_ratings
from Customer C
left join Reviews R
on P.CustomerID = R.CustomerID
where Year(P.ReleaseDate) = 2018 and sum(R.NumberView)  > 50
group by 1;
```

3. **To identify which categories are appreciated by the customers.**

```
select c.CategoryName, p.ProductName, average(r.RatingScores) as avg_rating,
average(r.NumberView) as avg_views
from Product p
join Category c
on p.CategoryID = c.CategoryID
join Review r
on p.ProductID = r.ProductID
where r.RatingScores >= 4
group by 1,2
order by 3,4 desc;
```

4. **This query will provide us with insights of products under each category that have the most sales.**

```
select c.CategoryName, p.ProductName, sum(t.Quantity * t.Price) as TotalSales
from Product  p
join Category  c
on p.CategoryID = c.CategoryID
join Transaction t
on p.ProductID = t.ProductID
group by 1,2
order by 3 desc;
```

5. **This query will help us in knowing the salestrend by location, which will help NIKE with advertising strategies**

```
select a.AddState, count(t.TransactionID) as OrderCount, sum(t.Quantity*t.Price) as TotalSales
from Transaction  t
join Customer c
on t.CustomerID = c.CustomerID
join Addressbook  a
on c.CustomerID = a.CustomerID
group by 1
order by 3 desc
limit 1000;
```

6. **This query will give us information about trending editions. These results will help NIKE in making marketing strategies**

```
select c.Edition, sum(product_sales) as edition_sales
from
        ( select ProductID, sum(Price*Quantity) as product_sales
        from Transaction
        group by 1
        ) b
        left join Product c
        on b.ProductID = c.ProductID
group by 1
order by 2 desc;
```

7. **This query is for generating summary of sales by customer demographics. These results will help NIKE in understanding his customer profile for carrying out targeted marketing and increasing revenue**

```
select gender, 2019 - year(DOB) as age, product_sales
from customer a
left join
        (
        select CustomerID, sum(price*qty) as product_sales
        from transaction
        group by 1
        )b
on a.CustomerID = b.CustomerID
group by 1,2
order by 3 desc;
```

8. **Select the most popular product which women prefer most.**

```
select P.ProductID, P.ProductName, sum(T.quantity*T.price) as TotalSales
from Product P
join Transactions T
on P.ProductID = T.ProductID
join Customer C
on C.CustomerID = T.CustomerID
where C.gender = 'Female'
group by 1,2
order by TotalSales desc;
```

9. **This query is for generating product sales trend across quarters. These results based on historic data can provide NIKE insights into the effectiveness of its previous marketing strategies**

```
select c.CategoryID, a.ProductID, quarter(a.date) as qtr, sum(a.product_sales)
```

```
from
        (
        select ProductID, date, sum(price*qty) as product_sales
        from transaction
        group by 1,2
        )a
        left join
        product b
        on a.ProductID = b.ProductID
        left join
        category c
        on a.CategoryID = b.CategoryID
group by 1,2,3
order by 4 desc;
```

10. **Using this query to check which month in 2019 has the highest sales. In this case, we can analyze the highest month to see what happened.**

```
select Month(Date) as mth, Sum(price*qty) as TotalPurchase
from Transaction
where year(Date) = '2019'
group by 1
order by 2 desc;
```

11. **Find the sales by category**

```
select CategoryName, sum(quantity*price) as Sales
from Category C
join Product P
on P.CategoryID = C.CategoryID
joinTransaction T
onT.ProductID = P.ProductID
group by 1
order by 2 desc;
```