# Introducción

En este documento se denotan distintos aspectos notables de la base de datos (BD). El objetivo de este documento es servir como base para futuros cambios a realizar en la BD con intención de hacer un proceso de análisis de datos comprensivo.

# Contenido de la DB

Encontramos las siguientes columnas en la BD:

|  |  |  |
| --- | --- | --- |
| Columnas | Tipo | Significado |
| Transaction\_ID |  | Identificador único para cada transacción |
| Customer\_ID |  | Identificador único para cada cliente |
| Name |  | Nombre del cliente |
| Email |  | Email del cliente |
| Phone |  | Teléfono del cliente |
| Address |  | Dirección del cliente |
| City |  | Ciudad donde vive el cliente |
| State |  | Estado donde vive el cliente |
| Zipcode |  | Zona postal de la dirección donde cliente |
| Country |  | País donde vive el cliente |
| Age |  | Edad del cliente |
| Gender |  | Genero del cliente |
| Income |  | Nivel de ingreso del cliente |
| Customer\_Segment |  | Segmentación del cliente |
| Year |  | Año de la última compra del cliente |
| Month |  | Mes de la última compra del cliente |
| Date |  | Fecha de la última compra del cliente |
| Time |  | Hora de la última compra del cliente |
| Total\_Purchases |  | Número de ítems comprados |
| Amount |  | Costo de un ítem |
| Total\_Amount |  | Costo total de la transacción (Total\_Purchases\*Amount) |
| Product\_Category |  | Categoría del producto |
| Product\_Brand |  | Marca del producto |
| Product\_Type |  | Tipo del producto |
| Feedback |  |  |
| Shipping\_Method |  | Método de envío usado |
| Payment\_Method |  | Método de pago |
| Order\_Status |  | Status de la orden |
| products |  | Productos comprados |
| Ratings |  | Calificación del producto dada por el cliente |

Los atributos “Name”, “Email”, “Phone”, “Address”, “Zipcode” y “Shipping\_Method”, si bien importantes, no son necesarios para el presente proceso análisis de datos. Además, los campos “Year”, “Month” y “Total\_Purchase\_Amount” son redundantes debido a que dicha información puede ser conseguida en otros campos de ser necesaria.

# Análisis de la DB

En las siguientes tablas podemos observar los distintos valores de la categoría, tipos y marcas de los productos. Notar que existen valores nulos para las categorías y para las marcas.

Notar que las marcas “Mitsubhisi” y “Whirepool” están mal escritas.

|  |
| --- |
| Product\_Type |
| Bathroom |
| Bedding |
| BlueStar AC |
| Children's |
| Chocolate |
| Coffee |
| Decorations |
| Dress |
| Fiction |
| Fridge |
| Furniture |
| Headphones |
| Jacket |
| Jeans |
| Juice |
| Kitchen |
| Laptop |
| Lighting |
| Literature |
| Mitsubishi 1.5 Ton 3 Star Split AC |
| Non-Fiction |
| Shirt |
| Shoes |
| Shorts |
| Smartphone |
| Snacks |
| Soft Drink |
| T-shirt |
| Tablet |
| Television |
| Thriller |
| Tools |
| Water |

|  |
| --- |
| Product\_Brand |
| NULL |
| Adidas |
| Apple |
| Bed Bath & Beyond |
| BlueStar |
| Coca-Cola |
| HarperCollins |
| Home Depot |
| IKEA |
| Mitsubhisi |
| Nestle |
| Nike |
| Penguin Books |
| Pepsi |
| Random House |
| Samsung |
| Sony |
| Whirepool |
| Zara |

|  |
| --- |
| Product\_Category |
| NULL |
| Books |
| Clothing |
| Electronics |
| Home Decor |

En las siguientes tablas podemos observar el contenido de la BD (tipos y marcas) por categoría.

|  |  |
| --- | --- |
| product\_category | Product\_Type |
| Books | Children's |
| Books | Fiction |
| Books | Literature |
| Books | Non-Fiction |
| Books | Thriller |
| Clothing | Dress |
| Clothing | Jacket |
| Clothing | Jeans |
| Clothing | Shirt |
| Clothing | Shoes |
| Clothing | Shorts |
| Clothing | T-shirt |
| Electronics | BlueStar AC |
| Electronics | Fridge |
| Electronics | Headphones |
| Electronics | Laptop |
| Electronics | Mitsubishi 1.5 Ton 3 Star Split AC |
| Electronics | Smartphone |
| Electronics | Tablet |
| Electronics | Television |
| Grocery | Chocolate |
| Grocery | Coffee |
| Grocery | Juice |
| Grocery | Snacks |
| Grocery | Soft Drink |
| Grocery | Water |
| Home Decor | Bathroom |
| Home Decor | Bedding |
| Home Decor | Decorations |
| Home Decor | Furniture |
| Home Decor | Kitchen |
| Home Decor | Lighting |
| Home Decor | Tools |

|  |  |
| --- | --- |
| product\_category | Product\_brand |
| Books | NULL |
| Books | HarperCollins |
| Books | Penguin Books |
| Books | Random House |
| Clothing | NULL |
| Clothing | Adidas |
| Clothing | Nike |
| Clothing | Zara |
| Electronics | NULL |
| Electronics | Apple |
| Electronics | BlueStar |
| Electronics | Mitsubhisi |
| Electronics | Samsung |
| Electronics | Sony |
| Electronics | Whirepool |
| Grocery | NULL |
| Grocery | Coca-Cola |
| Grocery | Nestle |
| Grocery | Pepsi |
| Home Decor | NULL |
| Home Decor | Bed Bath & Beyond |
| Home Decor | Home Depot |
| Home Decor | IKEA |

## Categoría Books

Fijarse que el tipo de producto “Children’s” tiene productos que no parecen ser libros. De hecho, literalmente “Books” es un producto más. Los demás tipos no presentan este error.

Esta categoría en si misma es un producto, el tipo son géneros y los productos son subgéneros.

|  |  |
| --- | --- |
| Product\_Type | Products |
| Children's | Art supplies |
| Children's | Books |
| Children's | Building blocks |
| Children's | Clothing |
| Children's | Educational kits |
| Children's | Games |
| Children's | Plush toys |
| Children's | Puzzles |
| Children's | Sports equipment |
| Children's | Toys |
| Fiction | Adventure |
| Fiction | Dystopian |
| Fiction | Fantasy |
| Fiction | Historical fiction |
| Fiction | Horror |
| Fiction | Literary fiction |
| Fiction | Mystery |
| Fiction | Romance |
| Fiction | Science fiction |
| Fiction | Thriller |
| Literature | Anthologies |
| Literature | Classic literature |
| Literature | Contemporary literature |
| Literature | Drama |
| Literature | Essays |
| Literature | Literary fiction |
| Literature | Modern literature |
| Literature | Non-fiction literature |
| Literature | Poetry |
| Literature | Short stories |
| Non-Fiction | Biography |
| Non-Fiction | Business |
| Non-Fiction | Cooking |
| Non-Fiction | Health |
| Non-Fiction | History |
| Non-Fiction | Memoir |
| Non-Fiction | Psychology |
| Non-Fiction | Science |
| Non-Fiction | Self-help |
| Non-Fiction | Travel |
| Thriller | Action |
| Thriller | Adventure |
| Thriller | Crime |
| Thriller | Detective |
| Thriller | Legal thriller |
| Thriller | Mystery |
| Thriller | Political thriller |
| Thriller | Psychological thriller |
| Thriller | Suspense |
| Thriller | Techno-thriller |

## Categoría Clothing

Fijarse que en algunos tipos hay redundancias con el producto, en el caso de “Dress” tenemos ‘A-line **dress**”.

Esta categoría contiene productos muy específicos.

|  |  |
| --- | --- |
| Product\_Type | products |
| Dress | A-line dress |
| Dress | Bodycon dress |
| Dress | Casual dress |
| Dress | Cocktail dress |
| Dress | Fit and flare dress |
| Dress | Maxi dress |
| Dress | Sheath dress |
| Dress | Shift dress |
| Dress | Sundress |
| Dress | Wrap dress |
| Jacket | Blazer |
| Jacket | Bomber jacket |
| Jacket | Denim jacket |
| Jacket | Leather jacket |
| Jacket | Parka |
| Jacket | Peacoat |
| Jacket | Puffer jacket |
| Jacket | Trench coat |
| Jacket | Varsity jacket |
| Jacket | Windbreaker |
| Jeans | Bootcut jeans |
| Jeans | Boyfriend jeans |
| Jeans | Cropped jeans |
| Jeans | Distressed jeans |
| Jeans | Flare jeans |
| Jeans | High-waisted jeans |
| Jeans | Low-rise jeans |
| Jeans | Skinny jeans |
| Jeans | Straight-leg jeans |
| Jeans | Wide-leg jeans |
| Shirt | Blouse |
| Shirt | Button-down shirt |
| Shirt | Dress shirt |
| Shirt | Flannel shirt |
| Shirt | Henley shirt |
| Shirt | Hoodie |
| Shirt | Polo shirt |
| Shirt | Sweatshirt |
| Shirt | T-shirt |
| Shirt | Tank top |
| Shoes | Boots |
| Shoes | Espadrilles |
| Shoes | Flip flops |
| Shoes | High heels |
| Shoes | Loafers |
| Shoes | Oxfords |
| Shoes | Running shoes |
| Shoes | Sandals |
| Shoes | Slippers |
| Shoes | Sneakers |
| Shorts | Athletic shorts |
| Shorts | Bermuda shorts |
| Shorts | Board shorts |
| Shorts | Cargo shorts |
| Shorts | Chino shorts |
| Shorts | Cycling shorts |
| Shorts | Denim shorts |
| Shorts | Khaki shorts |
| Shorts | Skorts |
| Shorts | Swim trunks |
| T-shirt | Crew neck tee |
| T-shirt | Crop top |
| T-shirt | Graphic tee |
| T-shirt | Henley tee |
| T-shirt | Long-sleeve tee |
| T-shirt | Off-the-shoulder tee |
| T-shirt | Plain tee |
| T-shirt | Raglan tee |
| T-shirt | Scoop neck tee |
| T-shirt | V-neck tee |

## Categoría Electronics

Fijarse que en algunos tipos hay redundancias con el producto.

Esta categoría contiene productos muy específicos.

Los tipos “BlueStar AC” y “Mitsubishi 1.5 Ton 3 Star Split AC” no son tipos; realmente son marcas y/o modelos. Estos dos tipos son de aires acondicionados, debería estar en la categoría “Home Decor”.

En el tipo “Smartphones” se repite el producto “Xiaomi Mi”.

|  |  |
| --- | --- |
| Product\_Type | products |
| BlueStar AC | Cassette AC |
| BlueStar AC | Central AC |
| BlueStar AC | Ductless AC |
| BlueStar AC | Floor-standing AC |
| BlueStar AC | Inverter AC |
| BlueStar AC | Mini-split AC |
| BlueStar AC | Package AC |
| BlueStar AC | Portable AC |
| BlueStar AC | Split AC |
| BlueStar AC | Window AC |
| Fridge | Black refrigerator |
| Fridge | Bottom-freezer refrigerator |
| Fridge | Compact refrigerator |
| Fridge | Counter-depth refrigerator |
| Fridge | French door refrigerator |
| Fridge | Mini fridge |
| Fridge | Side-by-side refrigerator |
| Fridge | Smart refrigerator |
| Fridge | Stainless steel refrigerator |
| Fridge | Top-freezer refrigerator |
| Headphones | Bluetooth headphones |
| Headphones | DJ headphones |
| Headphones | Gaming headphones |
| Headphones | In-ear headphones |
| Headphones | Noise-cancelling headphones |
| Headphones | On-ear headphones |
| Headphones | Over-ear headphones |
| Headphones | Sports headphones |
| Headphones | Studio headphones |
| Headphones | Wireless headphones |
| Laptop | Acer Swift |
| Laptop | Asus ZenBook |
| Laptop | Dell XPS |
| Laptop | HP Spectre |
| Laptop | Lenovo ThinkPad |
| Laptop | LG Gram |
| Laptop | MacBook |
| Laptop | Microsoft Surface Laptop |
| Laptop | Razer Blade |
| Laptop | Samsung Notebook |
| Mitsubishi 1.5 Ton 3 Star Split AC | Air conditioner |
| Mitsubishi 1.5 Ton 3 Star Split AC | Cassette AC |
| Mitsubishi 1.5 Ton 3 Star Split AC | Central AC |
| Mitsubishi 1.5 Ton 3 Star Split AC | Ductless AC |
| Mitsubishi 1.5 Ton 3 Star Split AC | Floor-standing AC |
| Mitsubishi 1.5 Ton 3 Star Split AC | Inverter AC |
| Mitsubishi 1.5 Ton 3 Star Split AC | Mini-split AC |
| Mitsubishi 1.5 Ton 3 Star Split AC | Portable AC |
| Mitsubishi 1.5 Ton 3 Star Split AC | Split AC |
| Mitsubishi 1.5 Ton 3 Star Split AC | Window AC |
| Smartphone | Google Pixel |
| Smartphone | Huawei P |
| Smartphone | iPhone |
| Smartphone | LG G |
| Smartphone | Motorola Moto |
| Smartphone | Nokia |
| Smartphone | OnePlus |
| Smartphone | Samsung Galaxy |
| Smartphone | Sony Xperia |
| Smartphone | Xiaomi Mi |
| Smartphone | Xiaomi Mi |
| Tablet | Acer Iconia Tab |
| Tablet | Amazon Fire Tablet |
| Tablet | Asus ZenPad |
| Tablet | Google Pixel Slate |
| Tablet | Huawei MediaPad |
| Tablet | iPad |
| Tablet | Lenovo Tab |
| Tablet | Microsoft Surface |
| Tablet | Samsung Galaxy Tab |
| Tablet | Sony Xperia Tablet |
| Television | 4K TV |
| Television | Android TV |
| Television | Curved TV |
| Television | HDR TV |
| Television | LCD TV |
| Television | LED TV |
| Television | OLED TV |
| Television | Plasma TV |
| Television | QLED TV |
| Television | Smart TV |

## Categoría Grocery

Fijarse que en algunos tipos hay redundancias con el producto.

Esta categoría contiene productos muy específicos.

|  |  |
| --- | --- |
| Product\_Type | products |
| Chocolate | Chocolate bars |
| Chocolate | Chocolate cookies |
| Chocolate | Chocolate fondue |
| Chocolate | Chocolate mousse |
| Chocolate | Chocolate-covered fruits |
| Chocolate | Chocolate-covered nuts |
| Chocolate | Dark chocolate |
| Chocolate | Milk chocolate |
| Chocolate | Truffles |
| Chocolate | White chocolate |
| Coffee | Affogato |
| Coffee | Americano |
| Coffee | Cappuccino |
| Coffee | Coffee beans |
| Coffee | Espresso |
| Coffee | Ground coffee |
| Coffee | Instant coffee |
| Coffee | Latte |
| Coffee | Macchiato |
| Coffee | Mocha |
| Juice | Apple juice |
| Juice | Cranberry juice |
| Juice | Grape juice |
| Juice | Grapefruit juice |
| Juice | Mango juice |
| Juice | Mixed fruit juice |
| Juice | Orange juice |
| Juice | Pineapple juice |
| Juice | Pomegranate juice |
| Juice | Tomato juice |
| Snacks | Beef jerky |
| Snacks | Cheese snacks |
| Snacks | Chips |
| Snacks | Crackers |
| Snacks | Fruit snacks |
| Snacks | Granola bars |
| Snacks | Nuts |
| Snacks | Popcorn |
| Snacks | Pretzels |
| Snacks | Trail mix |
| Soft Drink | Cola |
| Soft Drink | Cream soda |
| Soft Drink | Energy drink |
| Soft Drink | Fruit punch |
| Soft Drink | Ginger ale |
| Soft Drink | Grape soda |
| Soft Drink | Iced tea |
| Soft Drink | Lemon-lime soda |
| Soft Drink | Orange soda |
| Soft Drink | Root beer |
| Water | Alkaline water |
| Water | Artesian water |
| Water | Bottled water |
| Water | Coconut water |
| Water | Distilled water |
| Water | Flavored water |
| Water | Mineral water |
| Water | Purified water |
| Water | Sparkling water |
| Water | Spring water |

## Marcas

En este caso nos podemos dar cuenta que hay discrepancia entre los productos y marcas.

|  |  |
| --- | --- |
| Product\_Brand | products |
| Apple | Acer Iconia Tab |
| Apple | Acer Swift |
| Apple | Amazon Fire Tablet |
| Apple | Asus ZenBook |
| Apple | Asus ZenPad |
| Apple | Dell XPS |
| Apple | Google Pixel |
| Apple | Google Pixel Slate |
| Apple | HP Spectre |
| Apple | Huawei MediaPad |
| Apple | Huawei P |
| Apple | iPad |
| Apple | iPhone |
| Apple | Lenovo Tab |
| Apple | Lenovo ThinkPad |
| Apple | LG G |
| Apple | LG Gram |
| Apple | MacBook |
| Apple | Microsoft Surface |
| Apple | Microsoft Surface Laptop |
| Apple | Motorola Moto |
| Apple | Nokia |
| Apple | OnePlus |
| Apple | Razer Blade |
| Apple | Samsung Galaxy |
| Apple | Samsung Galaxy Tab |
| Apple | Samsung Notebook |
| Apple | Sony Xperia |
| Apple | Sony Xperia Tablet |
| Apple | Xiaomi Mi |
| Samsung | Acer Iconia Tab |
| Samsung | Amazon Fire Tablet |
| Samsung | Asus ZenPad |
| Samsung | Google Pixel |
| Samsung | Google Pixel Slate |
| Samsung | Huawei MediaPad |
| Samsung | Huawei P |
| Samsung | iPad |
| Samsung | iPhone |
| Samsung | Lenovo Tab |
| Samsung | LG G |
| Samsung | Microsoft Surface |
| Samsung | Motorola Moto |
| Samsung | Nokia |
| Samsung | OnePlus |
| Samsung | Samsung Galaxy |
| Samsung | Samsung Galaxy Tab |
| Samsung | Sony Xperia |
| Samsung | Sony Xperia Tablet |
| Samsung | Xiaomi Mi |
| Sony | Google Pixel |
| Sony | Huawei P |
| Sony | iPhone |
| Sony | LG G |
| Sony | Motorola Moto |
| Sony | Nokia |
| Sony | OnePlus |
| Sony | Samsung Galaxy |
| Sony | Sony Xperia |
| Sony | Xiaomi Mi |
| Sony | Xiaomi Mi |