

# WORK IN PROGRESS REPORT

## H&M Product and Customer Data

### Data Description

H&M Group is a family of brands and businesses with 53 online markets and approximately 4,850 stores. H&M online store offers shoppers an extensive selection of products to browse through. But with too many choices, customers might not quickly find what interests them or what they are looking for, and ultimately, they might not make a purchase. To enhance the shopping experience, product recommendations are key. More importantly, helping customers make the right choices also has positive implications for sustainability, as it reduces returns, and thereby minimizes emissions from transportation.

H&M Group has made their data available to analysts to help develop product recommendations based on data from previous transactions, as well as from customer and product meta data. The available meta data spans from simple data, such as garment type and customer age, to text data from product descriptions, and image data from garment images.

### Story

Using the data available, we can form insights into what H&M sells mostly, who is buying it, and how often they are buying it. Can we make viable predictions from historical transactions data to see what customers might purchase next? Combining transaction data, clothing article data, and customer data, we can answer these questions.

### Audience

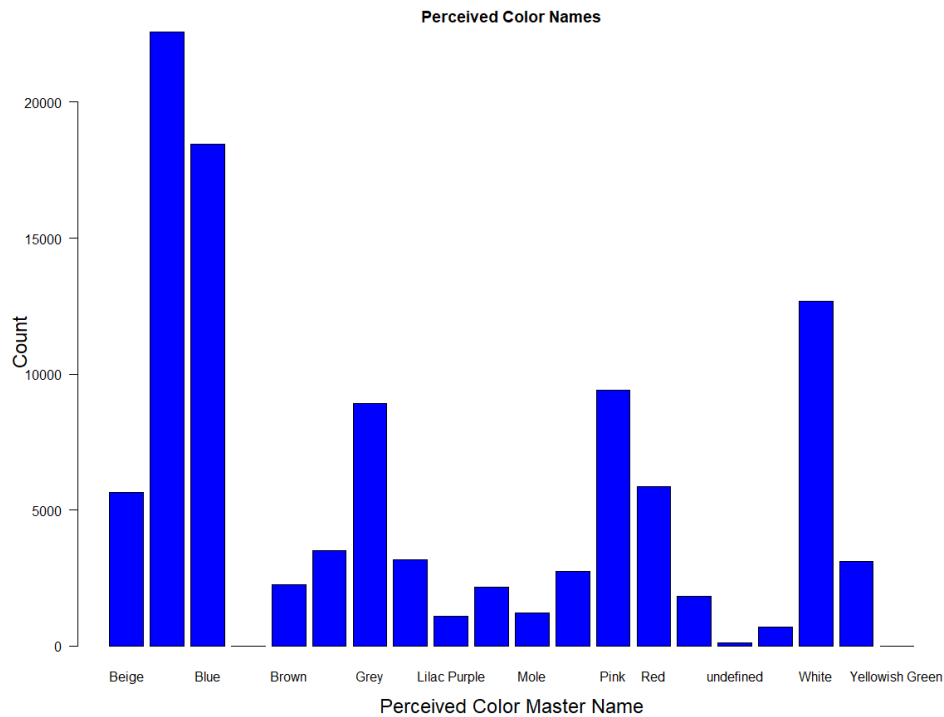
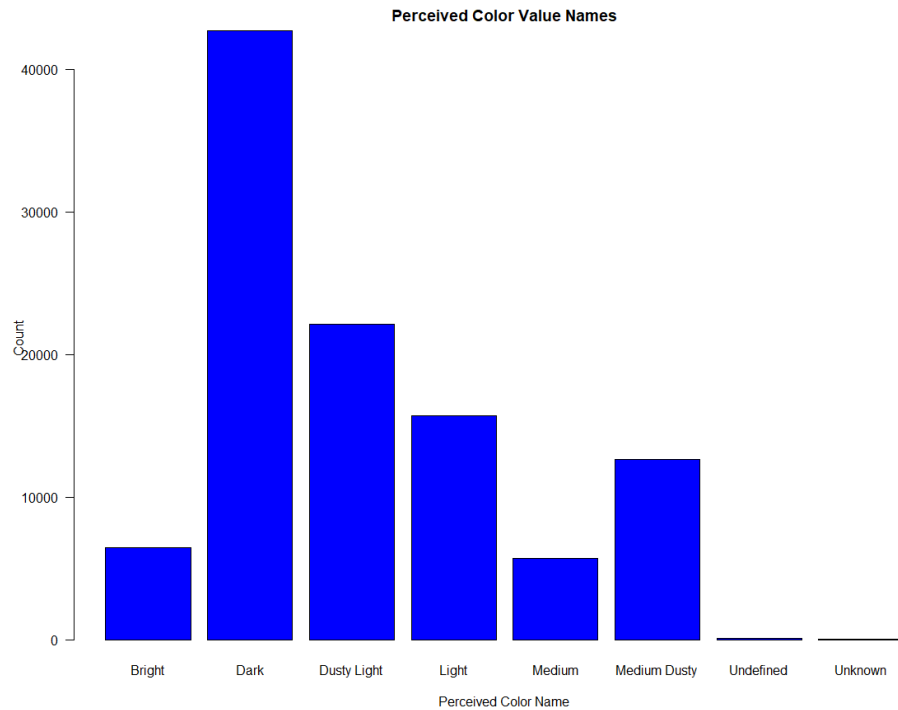
H&M marketing strategists and sales executives would be interested in this type of information about their customers' purchasing habits, leading to more informed decision making and leaner business operations.

### Questions

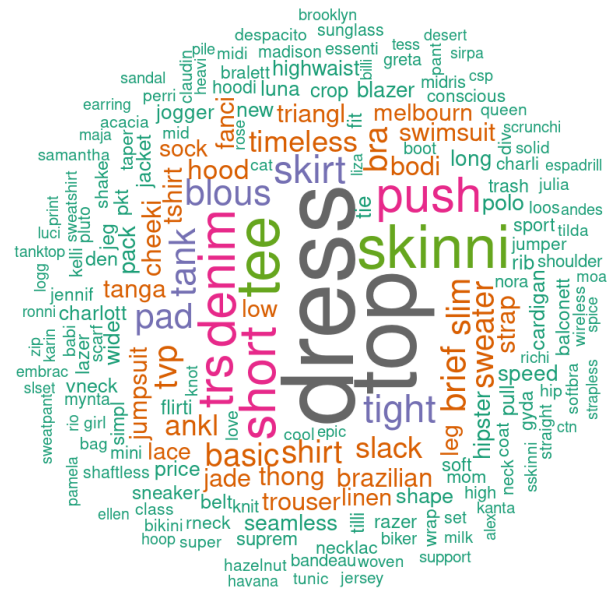
- What are the top selling products?
- What are the best selling product categories?

- Who are the most frequent customers?
- How frequently do customers make purchases?
- Which articles tend to be purchased more than once by customers?

## EDA Plots



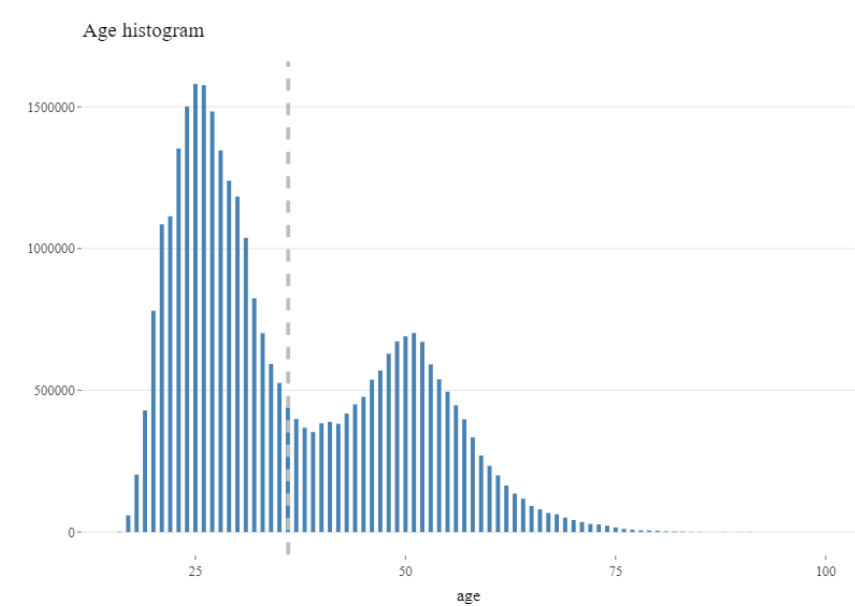
Word Cloud: Product names



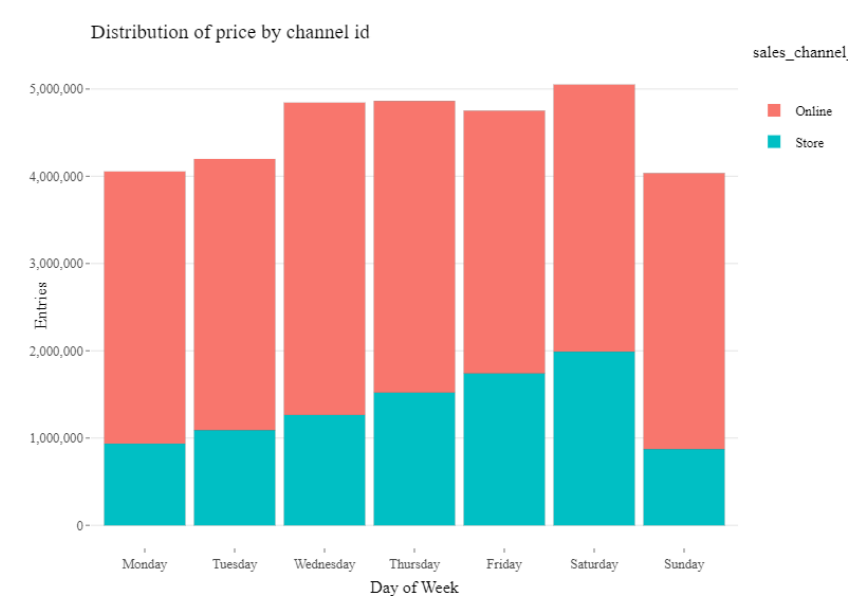
*Word Cloud: Product Descriptions*



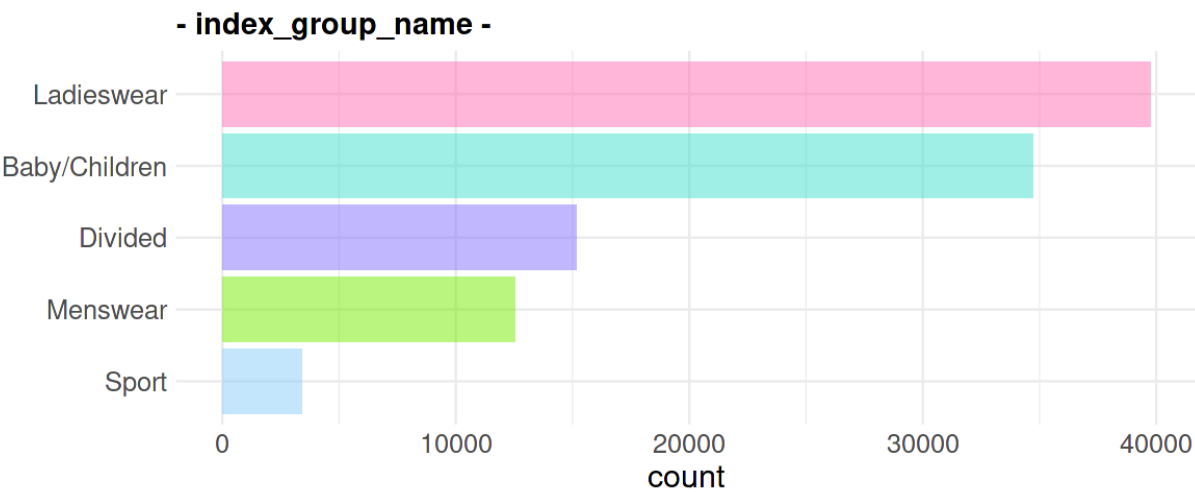
Histogram: Age of customers



Distribution of sales by weekday



Articles for sale by department



Number of articles by department

