

Forecasting and Modeling Watch Sales for B2B Distribution

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XYZ Company

Distributes fashion and household items to smaller retailers in the Caribbean & North American markets

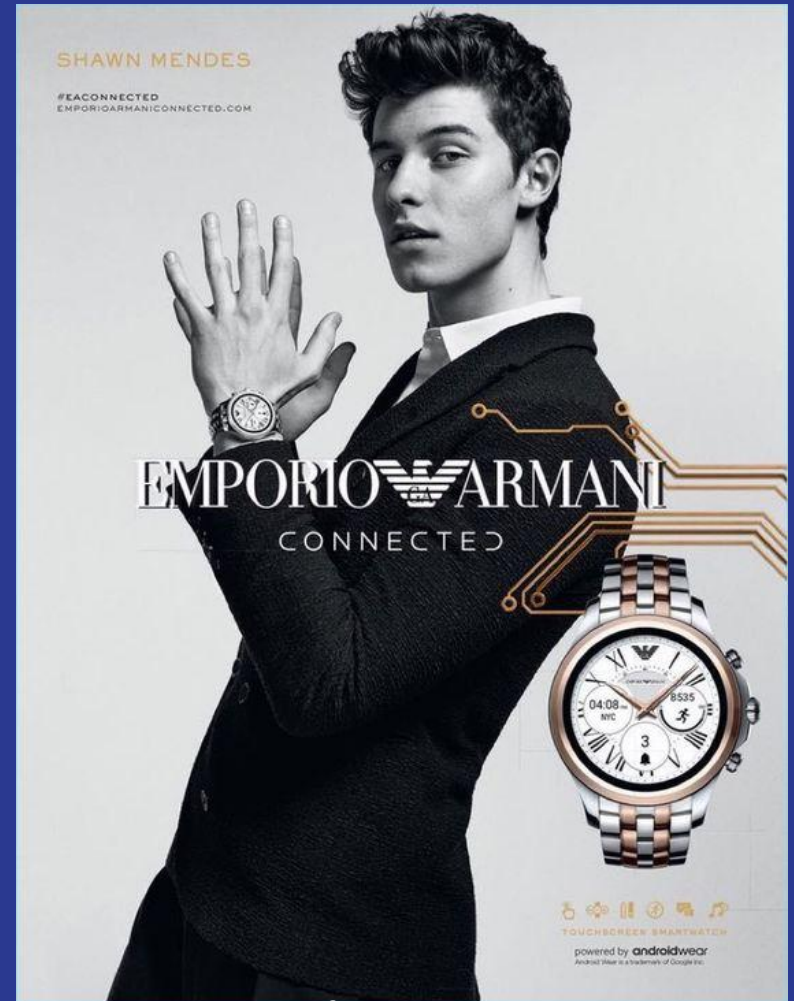
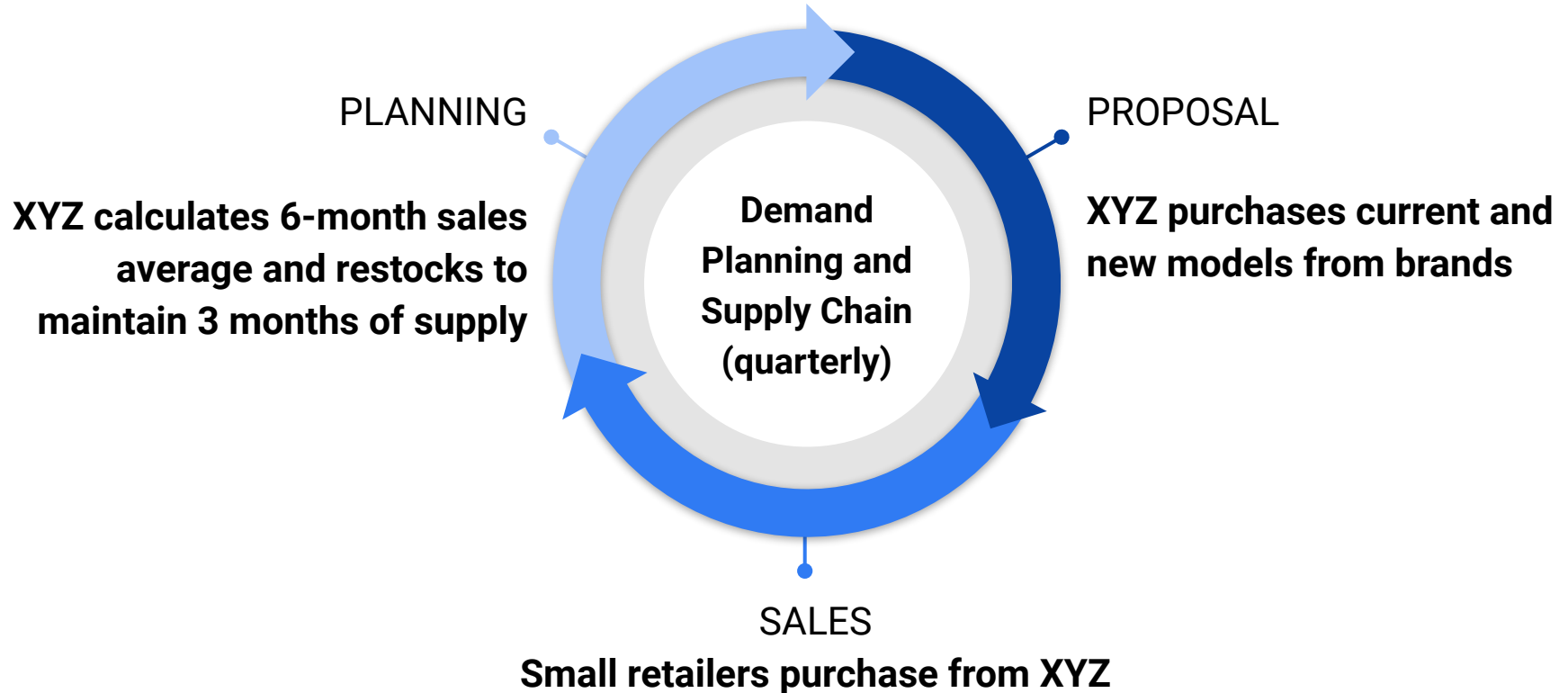
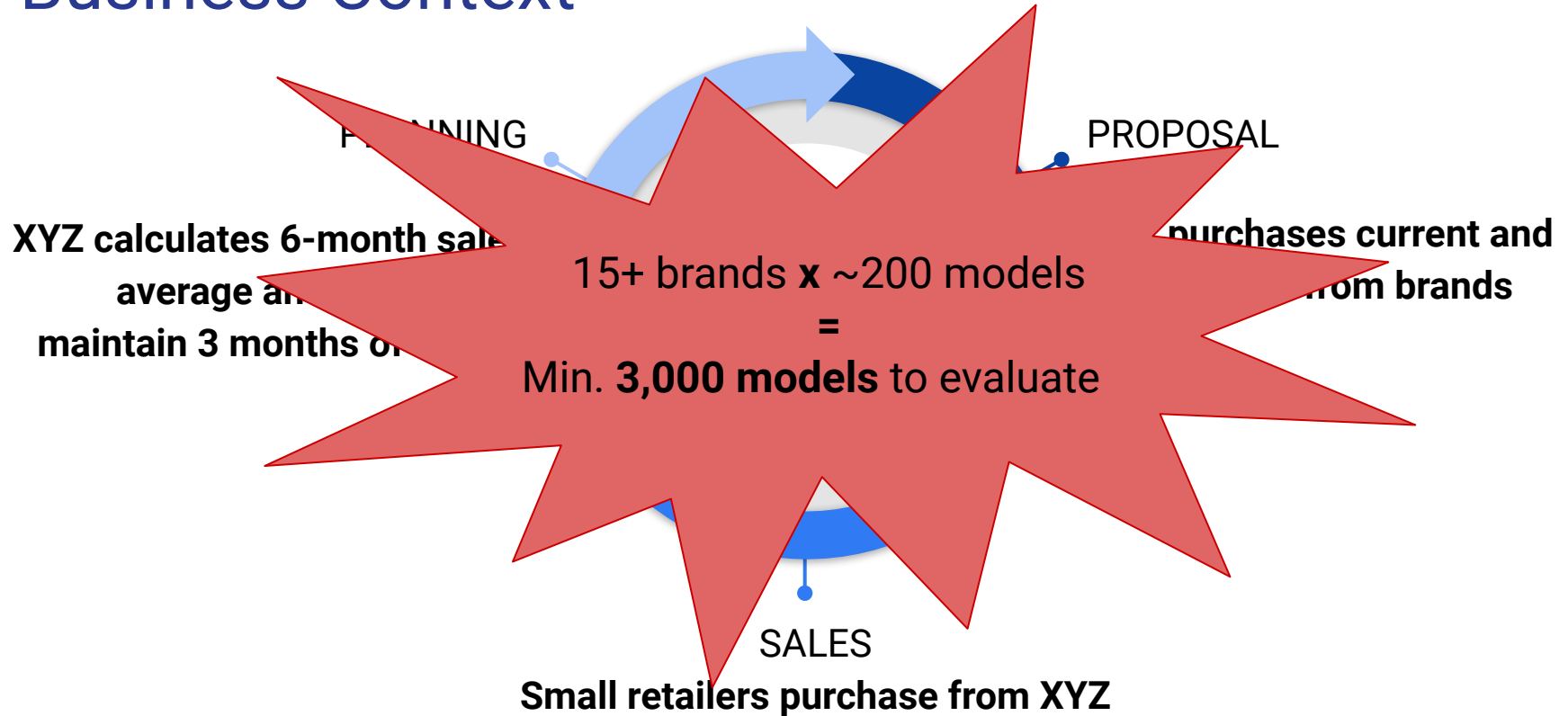


Image for internal use only

Business Context



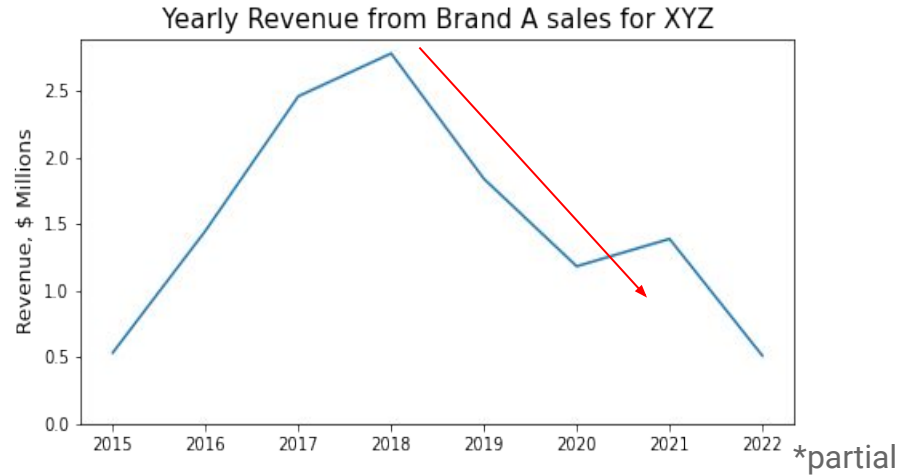
Business Context



Problem Statement

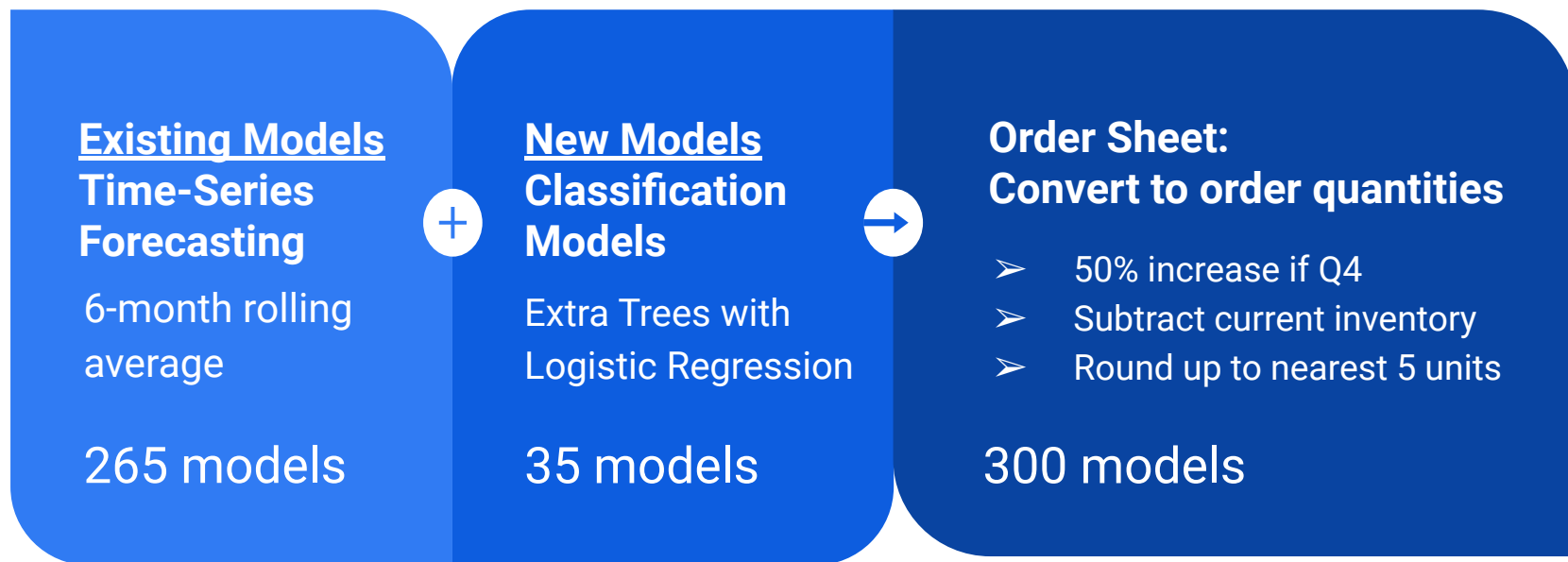
Build an automated proposal system that more quickly and accurately predicts watch sales based on:

- Historical sales, and
- If not available, individual model attributes (collection, gender, color, price, material)



Solution Approach

Brand A



Classification Model

Features:

Band Color
Band Material

Case Color
Case Material
Case Size

Dial Color

Movement Type



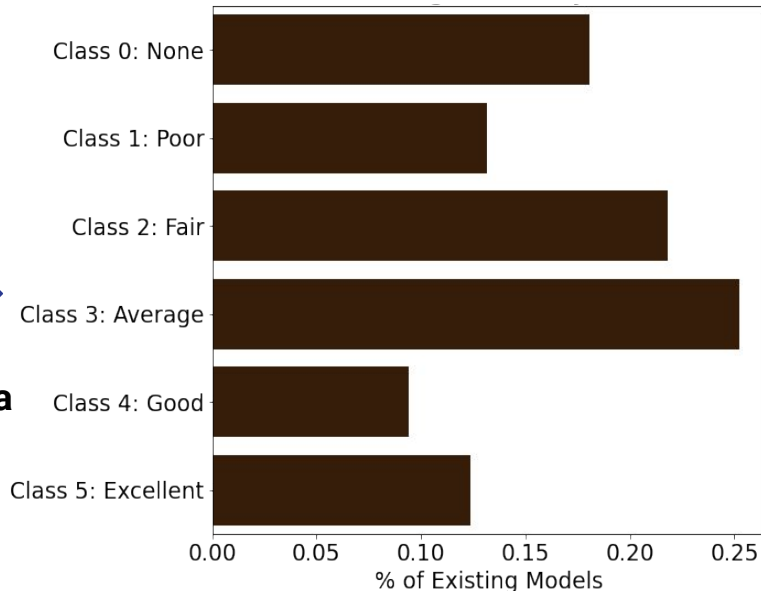
1700+
samples

14
features



80% Train Data
20% Test Data

Predicted Sales Performance:

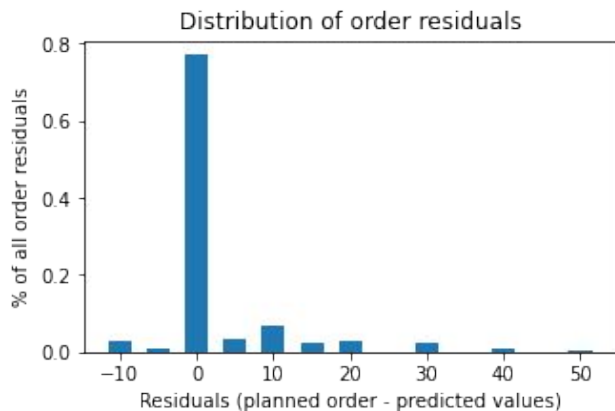


Other Features: Collection, Gender, Retail Price, Clasp Type, Water Resistance, Country of Origin, Warranty

Results

77%

of order quantities were identical to the *planned order*



41%

accuracy for the classification model using *test data*

91%

of order quantities were +/- 10 units of *planned order*

0-60

range of units in the *planned order*

Worst Prediction

Predicted Class: 0 (None)
Actual Class: 5 (Excellent)



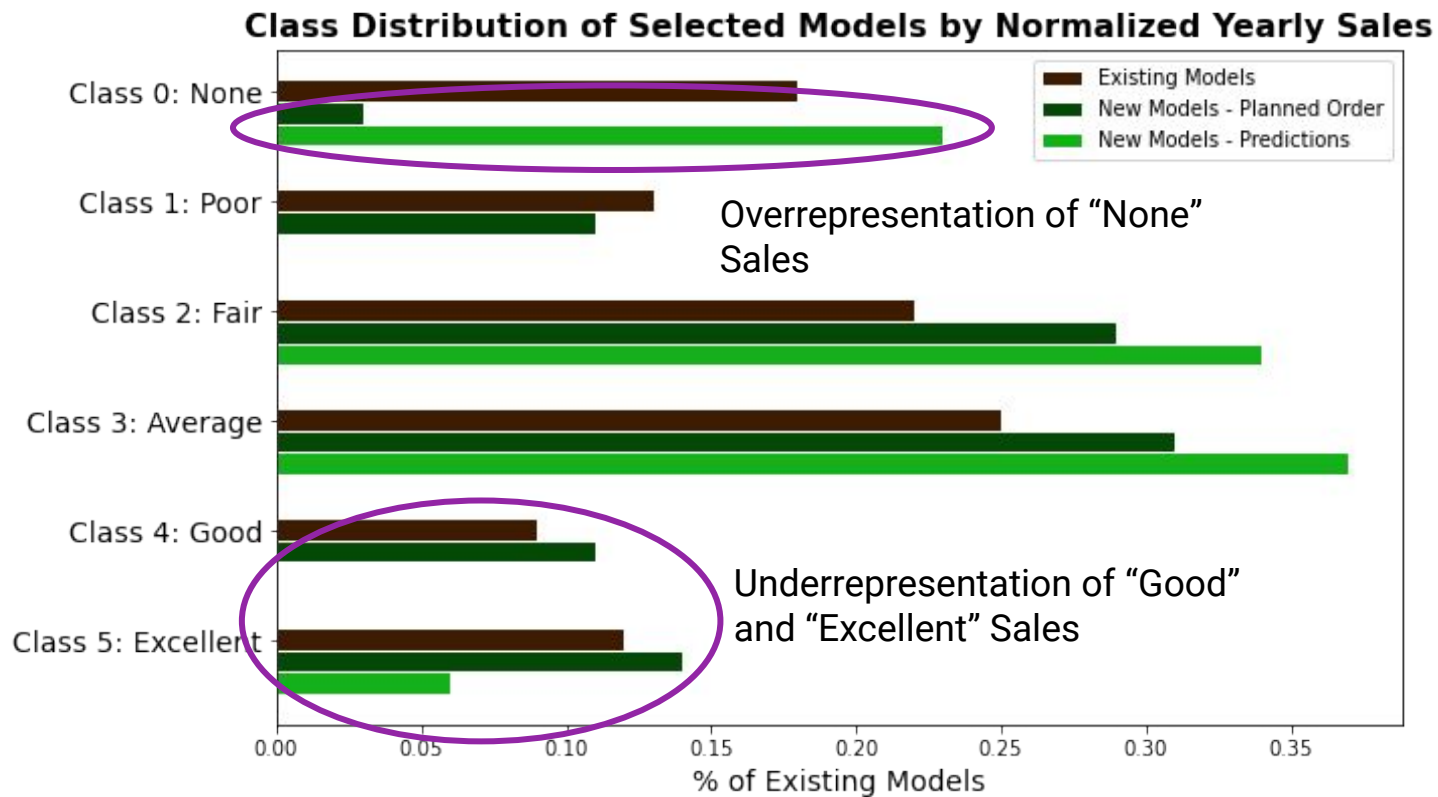
Key Observations:

- Classification model was split between classes 0 and 2
- Logistic Regression would have predicted class 2

Key Negative Factors:

- Clasp type: Buckle
 - Case size: 42 mm
 - Dial color: Blue
 - Band Material: Leather
-

Discussion



Recommendations and Next Steps

Short-Term Recommendations

- Use system to generate initial forecast - further review may be required

Future Work:

- Further consolidate values in categories
- Develop a script or app for more user-friendly use

Longer-Term Recommendations

- Restore and retain historical monthly sales for more sophisticated forecasting techniques, like SARIMA



Thank you! Questions?

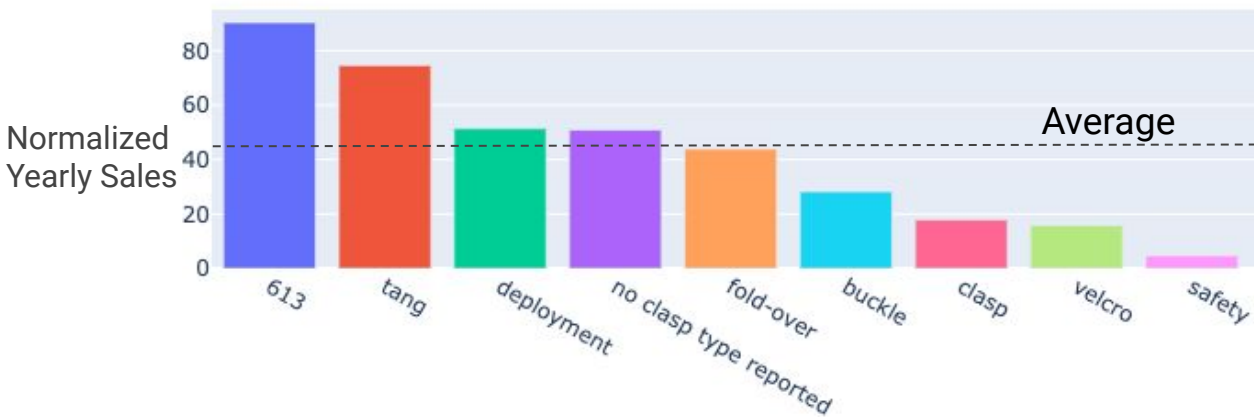
Image source

- Emporio Armani Connected, <https://pin.it/6SWHw68>

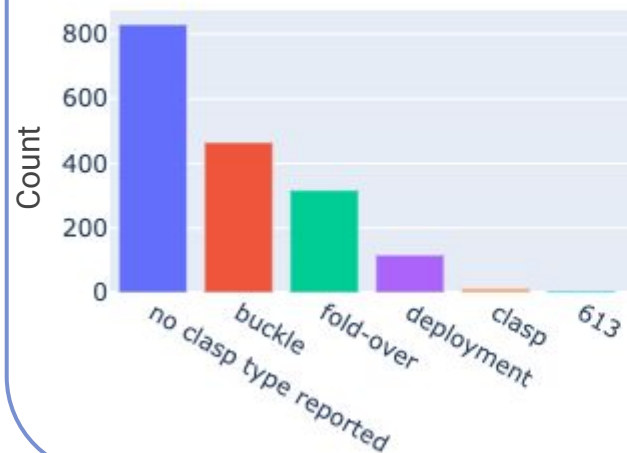
Exploratory Data Analysis

Exploring sales grouped by feature

Clasp Type Sales



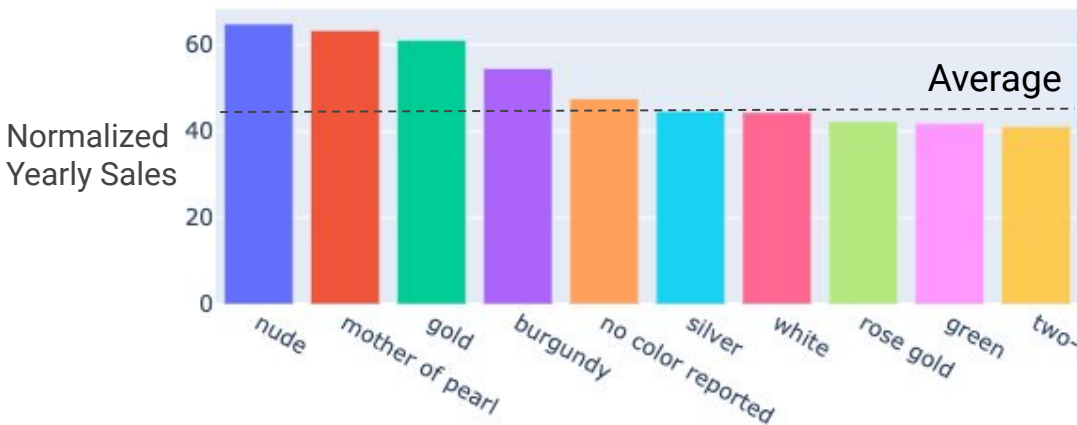
Most Common Clasp Types



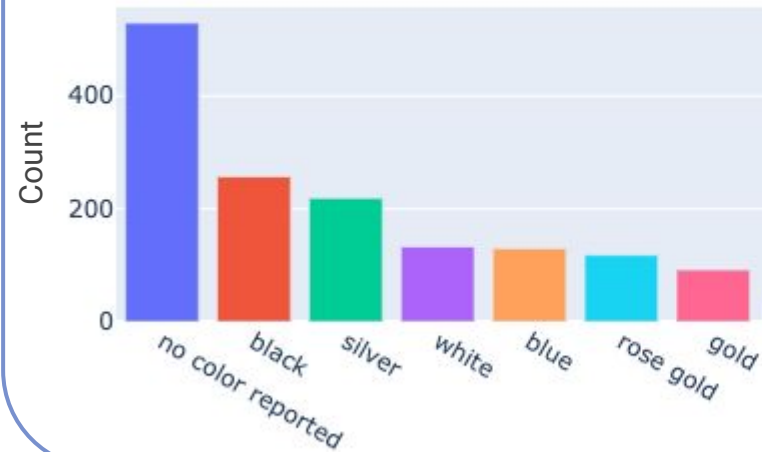
Exploratory Data Analysis

Exploring sales grouped by feature

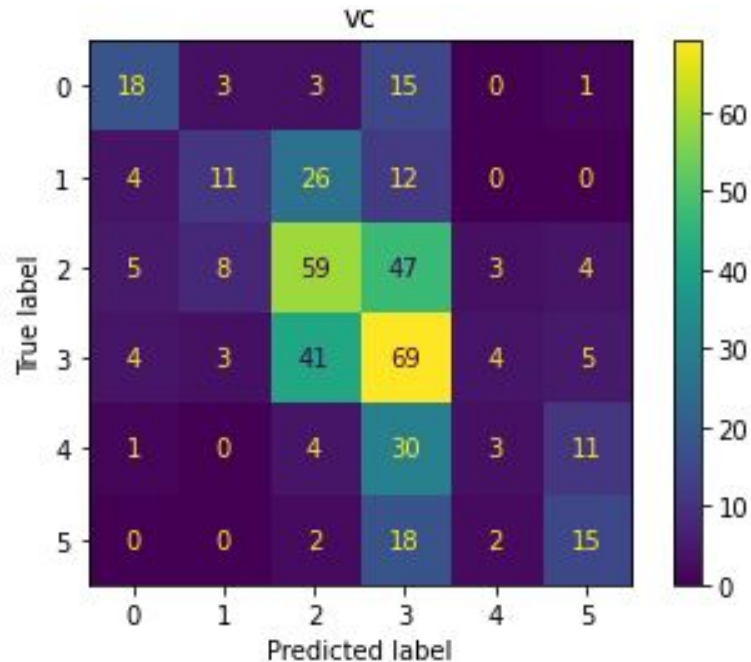
Case Color Sales



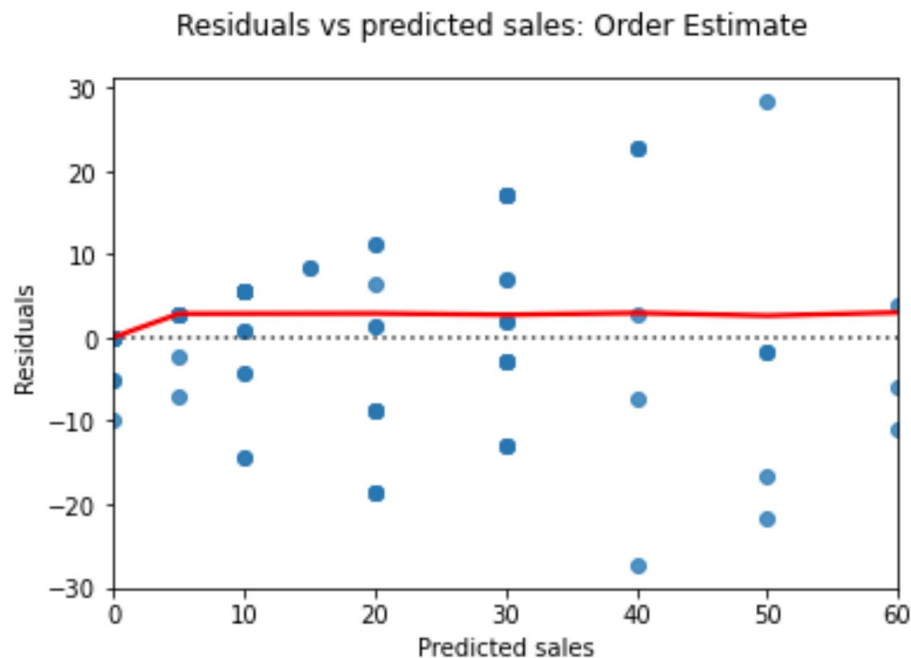
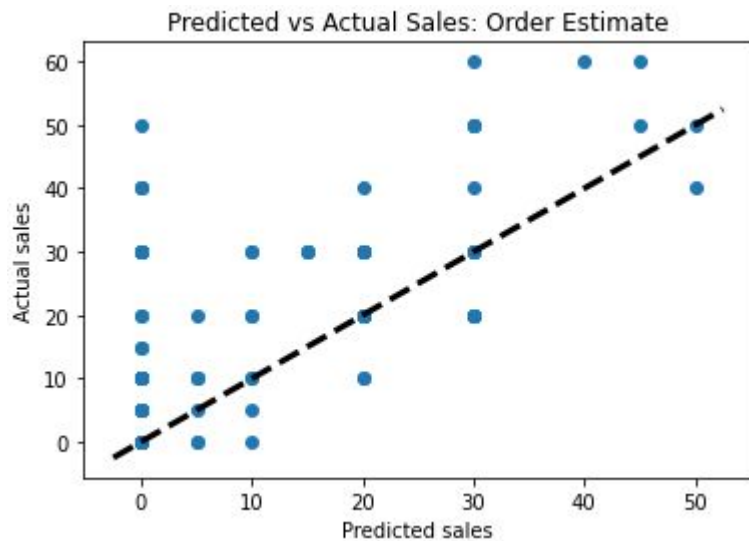
Most Common Colors



Classification Model - Confusion Matrix



Order Sheet - Metrics



Order Sheet - Metrics

