

Same Size, Same Brand, Different Fit!

Board Shorts or Swim Trunks

Who? Clifford Bridges

From? Flatiron School

When? September 12, 2019

The Problem with Fast Fashion

Is not with Fast Fashion, but with the Fashionistas!



Figure 1: Fast Fashion Misinformation

What are Our Options?



Figure 2: Is this what We have to wear?

Swim Trunks are NOT Board Shorts



Figure 3: Swim Trunks vs Board Shorts

Common Definitions

Definition (Swim Trunks)

Partial or full elastic (or similar stretch) waist, mid-thigh length, and looser around the hips.

Definition (Board Shorts)

Structured waist with mechanical stretch only, near knee length, and fitted around hips and thigh.

How Do Humans Classify When No Picture Exists?



Figure 4: How to decide with no visuals?

Dick's Names

Board Shorts or
Swim Trunks

“Whether you’re lounging or swimming at the pool, the Dolfin® Men’s Board Shorts are your next everyday essential.”

Board Shorts or
Swim Trunks

“Chill out this summer wearing the Dolfin® Men’s Basics Board Shorts.”

Dick's Wall of Text

Board Shorts or Swim Trunks

"The 11" inseam, fitted waist and microfiber polyester material offer casual style and a comfortable fit. A handy cargo pocket on the side keeps personal gear secure while the contrast stitching adds detail. Keep cool in the summer sun when you step out in the Dolfin® Men's Fitted Board Shorts."

Board Shorts or Swim Trunks

"The short features a mesh liner for all day comfort and a secure drawcord allowing you to worry about your relaxation status not your shorts! Store necessities in the lower side cargo pocket. Have a blast wearing the Dolfin® Men's Basics Board Shorts."

Dick's Images

Board Shorts



Figure 5: Dolfin® Men's Fitted Board Shorts

Swim Trunks



Figure 6: Dolfin® Men's Basics Board Shorts

Seriously, How Do Humans Classify When No Picture Exists?



Figure 7: How to decide with no visuals?

Natural Language Processing

Naive Goal

We would like to determine if a swimsuit is labeled as board shorts or a swim trunks based on the description alone.

Baseline Machine Learning Models

TF-IDF followed by:

Model	Accuracy	F1 Score
Logistic Regression	89.83%	92.31%
Random Forest (3)	84.75%	87.32%
Random Forest (101)	93.22%	94.27%
Multinomial Naive Bayes	86.44%	90.0%
Complement Naive Bayes	89.83%	92.31%

Baseline Model

All of the baseline models achieved fairly high accuracy and F1 scores!

Baseline Model

All of the baseline models achieved fairly high accuracy and F1 scores!

But what did they miss?

Model “Misses”

SwimOutlet: Swim Trunks

“Enter a paradise of flexibility and athletic performance with the Speedo Men’s Paradise Blend E-Board Short. This boardshort swimsuit features 4-way stretch, multiple pockets, UV protection, and a vibrant engineered print so you can enjoy your day in or out of the water.”

SwimOutlet: Board Shorts

“Designed for activity both in and out of the water, the Speedo Men’s Stretchtech Bonded Boardshort is a new breed of board short. Featuring 4-way stretch fabric and a StretchTech waistband that flexes and moves with you, this true boardshort is great for a day out.”

Measurable Goal

Goal

We would like to determine if the waist of a garment is stretchy or structured, using only the site-provided garment description.

New Definition

Definition (Misleading)

We call a men's swimsuit **misleading** if it is labeled as board shorts and has a stretch waist, or if it is labeled as swim trunks and has a structured waist.

Results

Swim Outlet Labels

3.4% of swim trunks from Swim Outlet are misleading.

6.21% of board shorts from Swim Outlet are misleading.

Results

Swim Outlet Labels

3.4% of swim trunks from Swim Outlet are misleading.
6.21% of board shorts from Swim Outlet are misleading.

Model Predictions

The model achieved a 30.6% reduction in misleading board shorts and a 100% reduction in misleading swim trunks!

Summary Graph

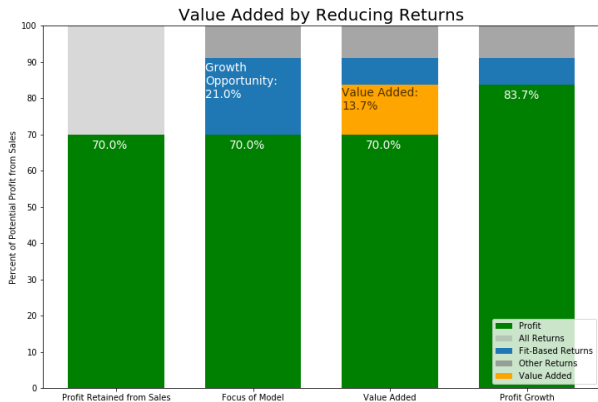


Figure 8: Value Added Bar Plot

Logistic Model Feature Importance

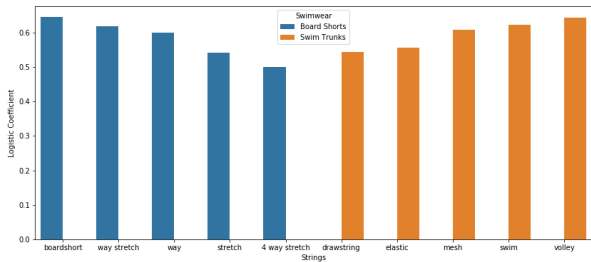


Figure 9: Logistic Model Feature Importance

Naive Bayes Model Feature Importance

Most
Informative
Features

String	Board Short : Swim Trunk	Odds
nike	1 : 0	19.5 : 1.0
rash	0 : 1	13.8 : 1.0
hyperdry	0 : 1	13.8 : 1.0
small	1 : 0	13.6 : 1.0
volley	1 : 0	12.9 : 1.0
walkshort	0 : 1	11.8 : 1.0
hyperthread	0 : 1	10.4 : 1.0
blocks	0 : 1	10.4 : 1.0
21	0 : 1	9.9 : 1.0

Why (Do) Looks Matter

Addressing this issue is dealing with a symptom of a larger problem of policing women's bodies. How we look in clothes affects us for better or **for worse**.