

# Same Size, Same Brand, Different Fit!

## Board Shorts or Swim Trunks

Who? Clifford Bridges

From? Flatiron School

When? September 25, 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 youre lounging or swimming at the pool, the Dolfin® Mens Board Shorts are your next everyday essential.”

Board Shorts or  
Swim Trunks

“Chill out this summer wearing the Dolfin® Mens 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® Mens 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® Mens Basics Board Shorts."



## 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 a 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!

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**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 Mens 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.

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## Model Predictions

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

# Summary Graph

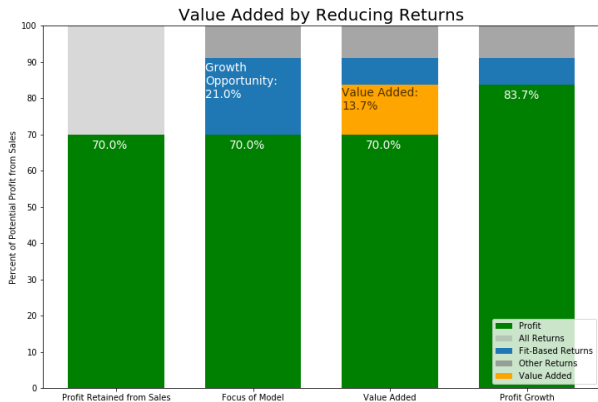


Figure 8: Value Added Bar Plot

# Logistic Model Feature Importance

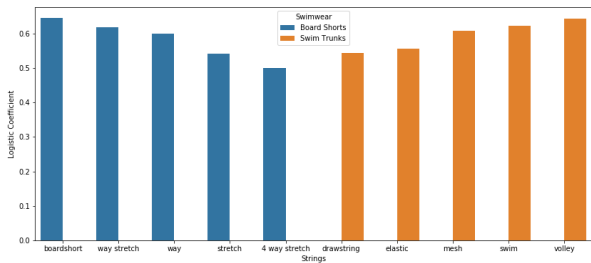


Figure 9: Logistic Model Feature Importance

# Naive Bayes Model Feature Importance

Most  
Informative  
Features

String	Swim Trunk : Board Short	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**.