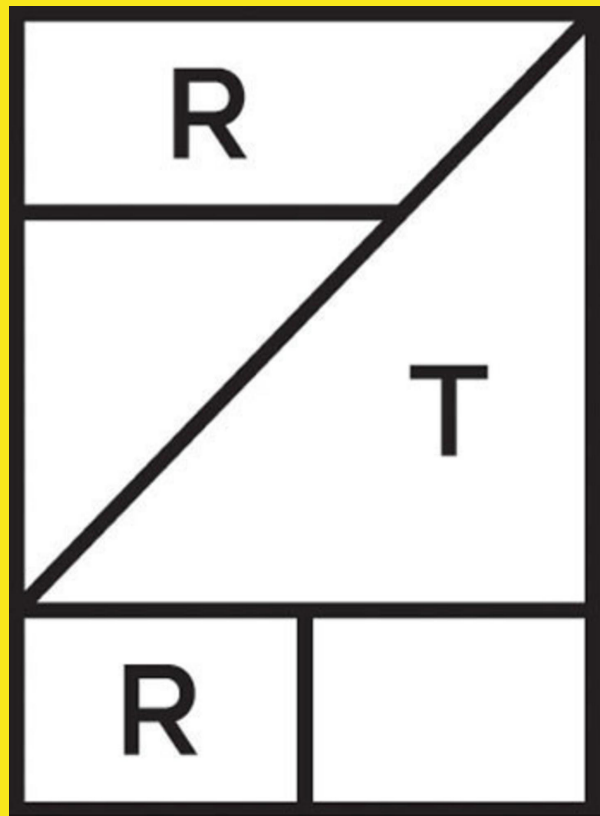


# Fitting The Data

**Clifford Bridges**  
**Allan Kim Gayahan**



RENT THE RUNWAY

*ModCloth*

# Common Body Shapes and Verbiage

## WHAT IS YOUR BODY SHAPE?

NEAT HOURGLASS



Your build is characterised by:

- A defined bust
- A defined waist
- A neat bottom
- Neat hips

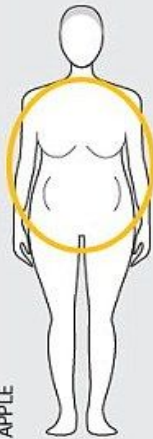
FULL HOURGLASS



Your build is characterised by:

- Bigger thighs
- A rounded bottom and hips
- A small waist
- A full bust

APPLE



Your build is characterised by:

- Rounder shoulder line and flattish bottom
- Average to big bust
- Fullness around the middle
- Good legs

PEAR



Your build is characterised by:

- Full hips or thighs, maybe saddle bags
- A defined waist
- Shoulders that are narrower than your hips
- A small top half as well as small bust

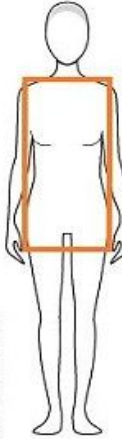
INVERTED TRIANGLE



Your build is characterised by:

- Your bottom half is smaller than your top
- Little definition between waist and hips
- Flat hips and bottoms
- Straight and squared shoulder line

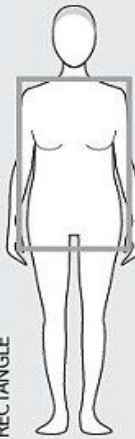
LEAN COLUMN



Your build is characterised by:

- Narrow shoulders
- Flat chest or small bust
- Small and non-defined waist
- Narrow hips and flat bottom

RECTANGLE



Your build is characterised by:

- Straight shoulder line and ribcage
- Straight hips and bottom
- Very little waist definition
- Average tummy

# Rent The Runway

## Ex. Null Hypotheses:

For a given a dress, the proportion of ratings over 8 for body type “X” is equal to the proportion of reviews over 8 overall ( $\alpha=0.05$ ).

## Ex. Alternative Hypotheses:

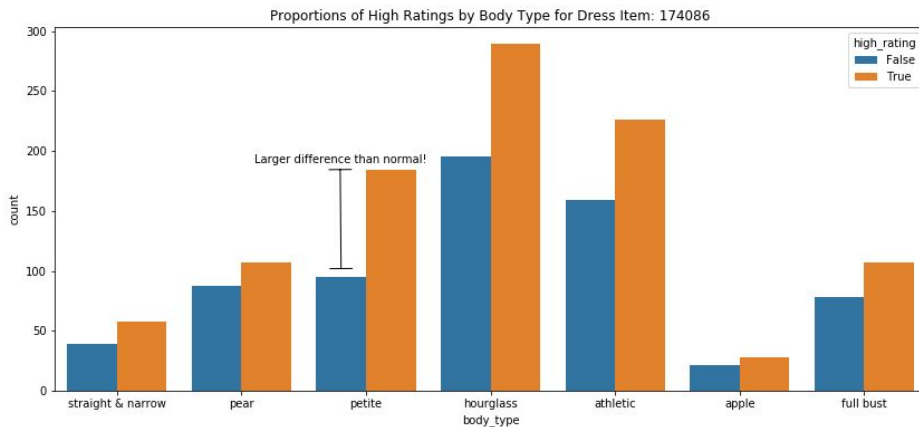
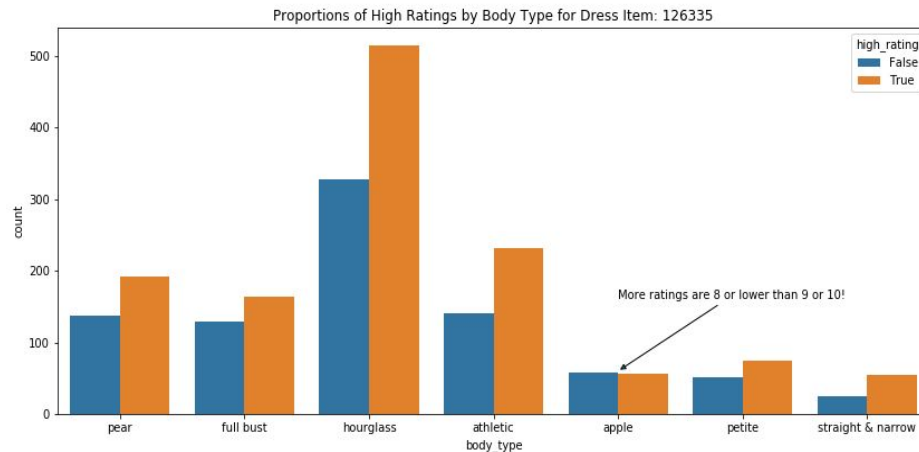
For a given a dress, the proportion of ratings over 8 for body type “X” is greater than the proportion of reviews over 8 overall.

# Rent The Runway

Reject the Null Hypothesis twice:

Apple body types are not a fan of 126355!

Petite body types really like 174086!



## Common Dress Styles for Body Type



*A-Line*



*Mermaid*



*Empire*



*Ball Gown*



*Sheath*



*Hourglass*

*full bust and full hips  
with waist definition*



*Round (Apple)*

*full bust and full hips without  
waist definitions*



*Rectangle*

*straight up and down proportions  
with very little waist definitions*



*Triangle (Pear)*

*broader hips than shoulders*



*Inverted Triangle*

*broad shoulders and small hips*

# Rent The Runway

## Null Hypothesis:

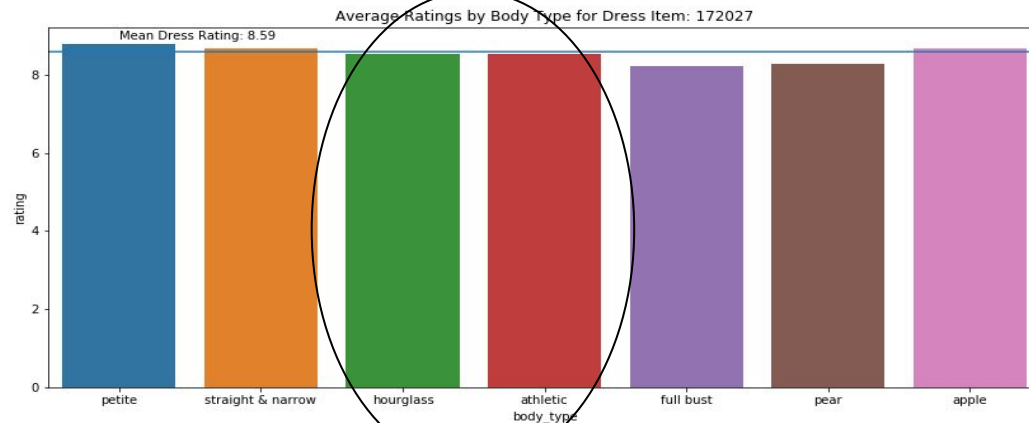
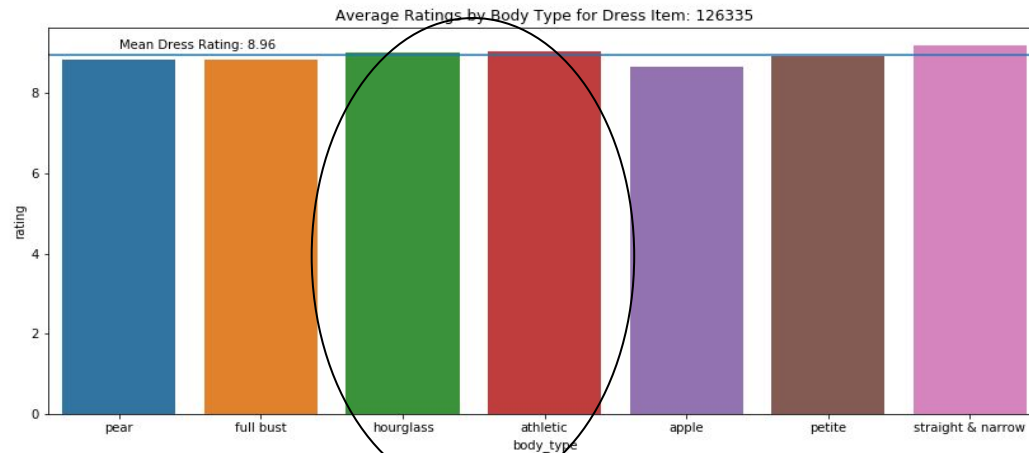
**For the given dress, the mean rating for reviewers with Athletic body type is equal to the mean rating for reviewers with Hourglass body type ( $\alpha=0.05$ ).**

## Alternative Hypothesis:

**For the given dress, the mean rating for reviewers with Athletic body type is not equal to the mean rating for reviewers with Hourglass body type.**

# Rent The Runway

Dress ID	Cohen's d = (mean_1 - mean_2) / pooled std
Dress 136110	0.0956
Dress 174086	-0.0399
Dress 130259	-0.0585
Dress 126335	0.0166
Dress 172027	-0.0044





# ModCloth Company

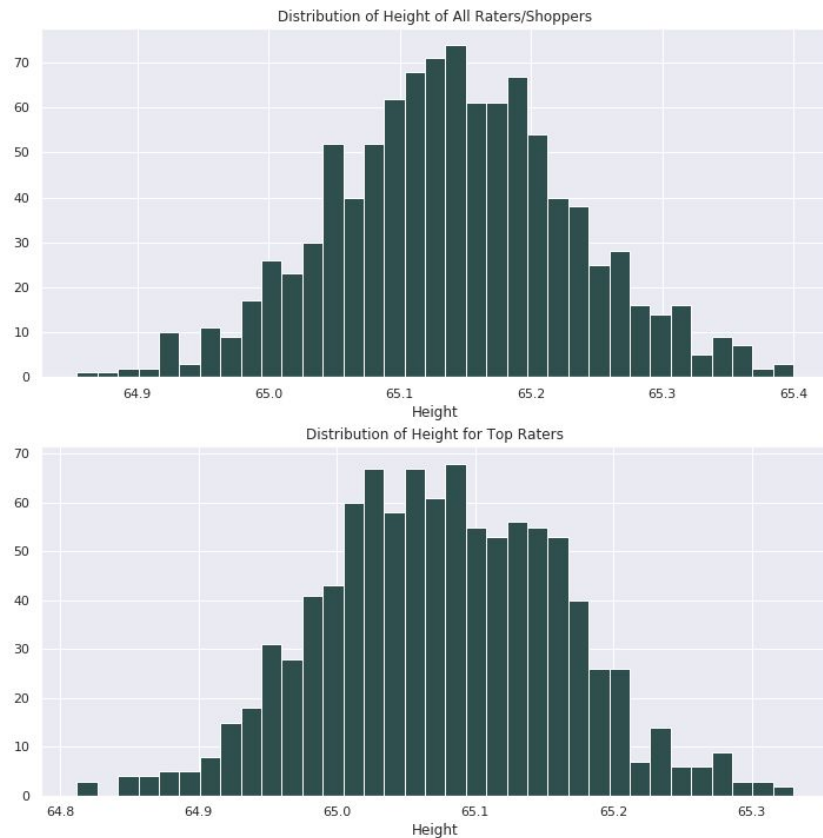
**Top Ratings has:**

**Fit** = 'fit'

**Length** = 'Just Right'

**Quality** = '4' or '5'

Based on the histogram,  
Top Raters Mean height = Population  
Mean Height



# ModCloth Company

**Null:**

Mean Height for Top Raters are  
equal to the Population Mean  
Height

**Alt:**

Top Raters Mean Height not  
equal to Population Mean Height

**Results:**

$p\text{-value} \approx 5.6 \times 10^{-36}$

Reject null



# ModCloth Company

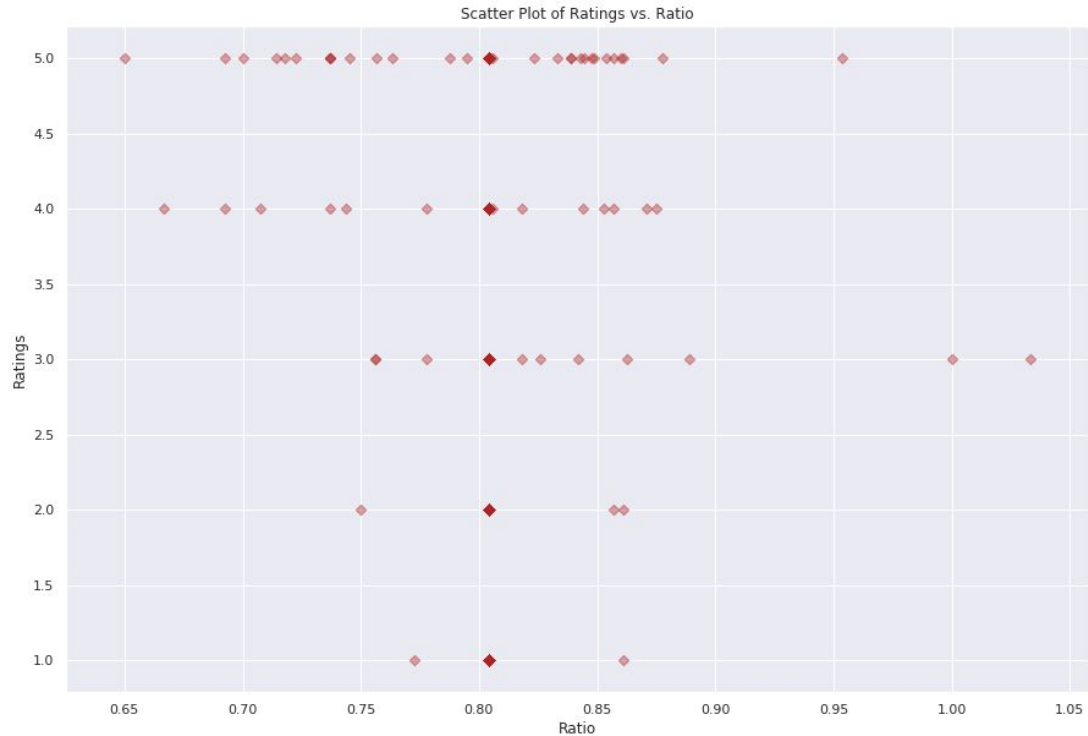
**Hip-Waist Ratio:**

**Low Risk < .80**

**.80 ≤ Moderate Risk < .85**

**High Risk ≥ .85**

Low Risk and Mod Risk  
seems to rate the same.



# ModCloth Company

**Null:** Mean Review for Low Risk Raters is equal to the Population Mean Review Mod Risk Raters

**Alt:** Mean Review for Low Risk Raters is not equal to the Population Mean Review Mod Risk Raters

**Result:**

$P\text{-value} \approx 0.37$

Failed to reject Null



# Future Goals

**Rent the Runway does not publish size charts for their garments!**

*Is this method better than letting the user pick their size from a size chart?*

**Rent The Runway user's get to self select body type!**

*Should Rent The Runway decide what body type the user is for them?*

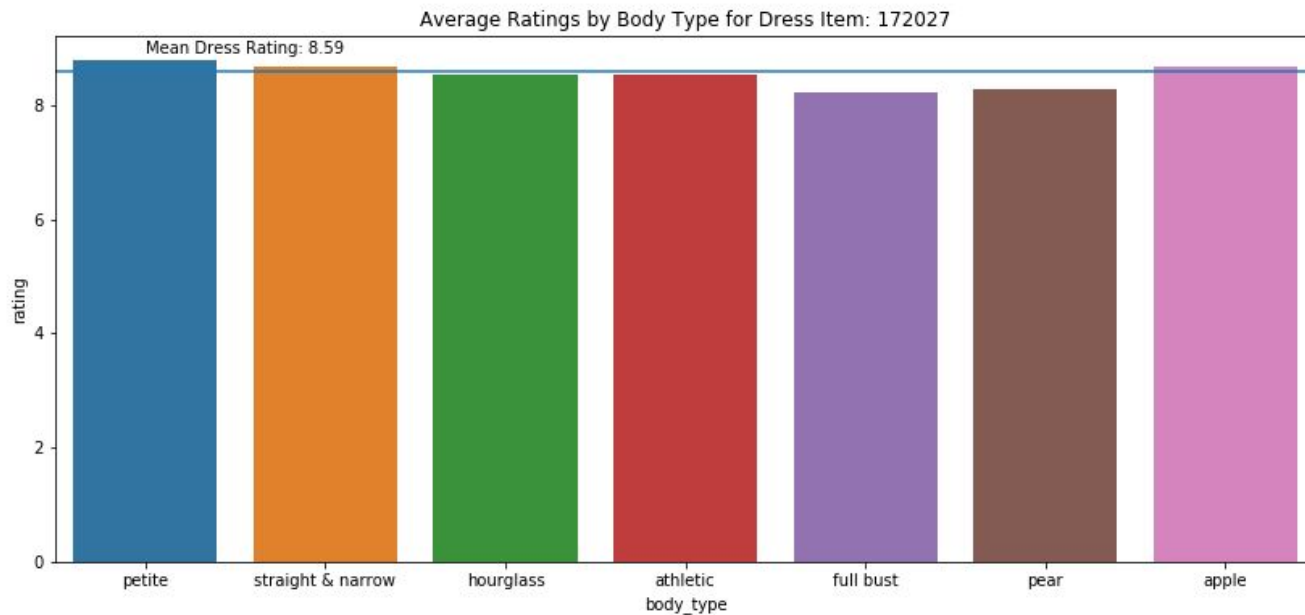


# Conclusion

- Identifying which garments tend to suit certain body types and guiding users appropriately will increase ratings
- Relying on Height would be useful to determine customer satisfaction/rating
- Using Hip to Waist Ratio would not be useful to determine a high rating

# Fun Extra Slides

Guess the type of dress based on body type review ratings!



# Fun Extra Slides

Our Guess: Shift Dress

