

# How will Project 1 be graded?

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**DSC 106: Data Visualization**

Sam Lau

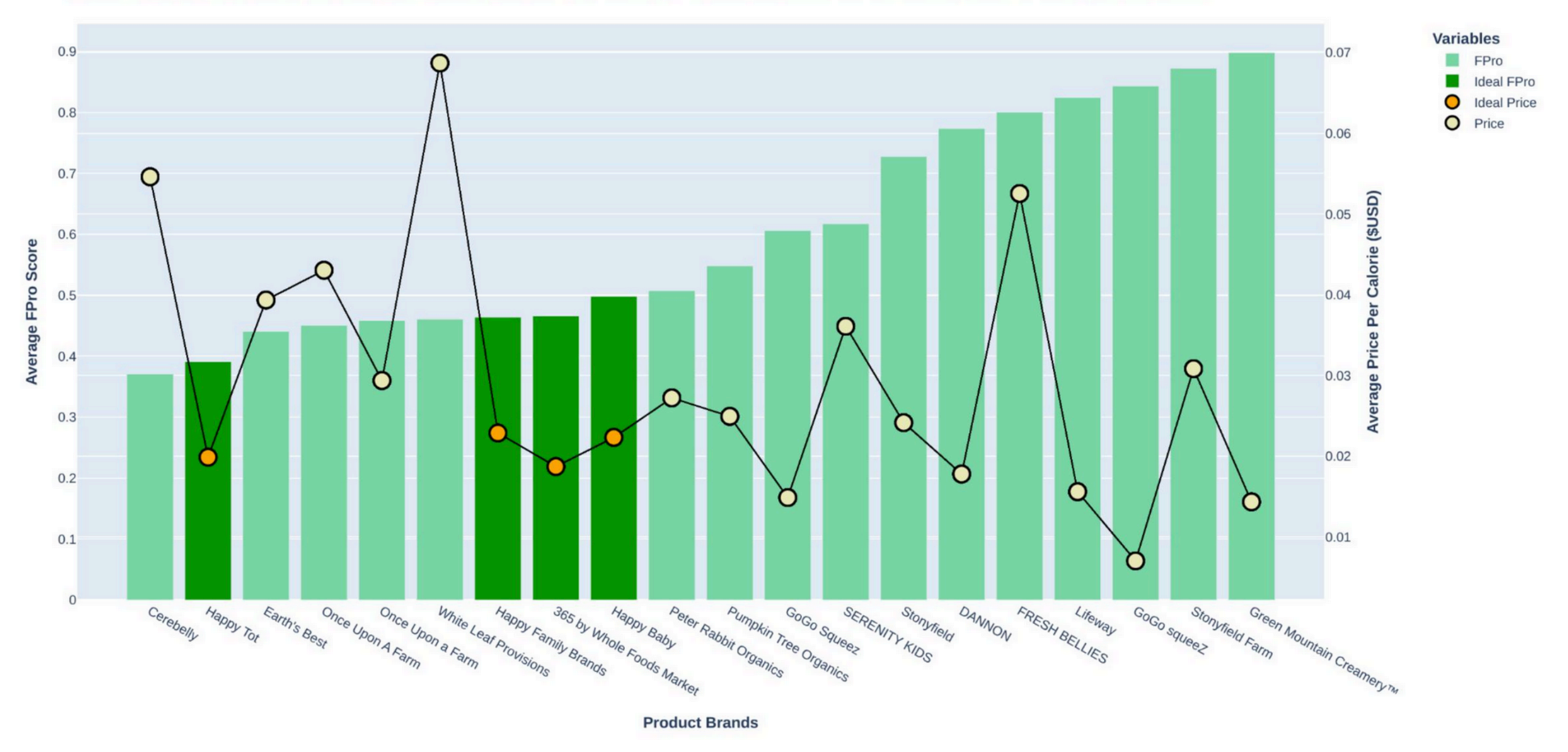
UC San Diego

Component	Excellent	Satisfactory	Not Satisfactory
Visual Encodings	The visualization does not violate the expressiveness criteria and the design choices (marks and encoding channels) are clear, evocative, and effective. (+4 points)	The visualization does not violate the expressiveness criteria, but another set of design choices (marks and encoding channels) could have been more effective (e.g. using the area visual channel instead of position when possible). (+3 points)	The visualization violates the expressiveness criteria (e.g. heavy overplotting, encodings that imply incorrect readings, etc.). (+2 points)
Annotations	In addition to the Satisfactory requirements, the plot contains appropriate and helpful annotations (e.g. text, coloring, shading) that draw the reader's attention to the most relevant parts of the data. (+2.5 points)	The plot's title contains an interesting research question or takeaway; the axes have clear, human-readable labels with units; and a legend is present if appropriate. (+2 points)	One or more of the required annotations are missing (e.g. a title that describes the plot rather than an interesting takeaway, axes use auto-generated labels from data columns, etc.). (+1 points)
Data Transformations		The visualization uses appropriate data transformations (e.g. filtering, aggregating) and describes the transformations to the reader (e.g. in the subtitle of the plot), In addition, it clearly and explicitly describes the transformations to the reader (e.g. in the subtitle of the plot). (+1.5 points)	The visualization used an inappropriate set of data transformations (e.g. filtering out important outliers), or did not clearly describe these transformations to the reader. (+1 point)
Writeup		The writeup clearly describes the motivation for the visualization and the rationale for its design decisions (e.g. the visual encodings, data transformations, color palette, etc.). It also contains an overview of the development process. (+2 points)	One or more required elements of the writeup has major issues (e.g. rationale misses important parts of the visualization design) or is missing. (+1 points)
Creativity and Originality	The submission exceeds the assignment requirements, with original insights or particularly engaging visualizations. (up to +1 bonus point)	The submission meets the assignment requirements. (+0 points)	

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Annotations	<p><b>Excellent:</b> Both expressive and effective</p> <p><b>Satisfactory:</b> Expressive, but not as effective</p> <p><b>Not Satisfactory:</b> Inexpressive</p>		
Data Transformations		The visualization uses appropriate data transformations (e.g. filtering, aggregating) and describes the transformations to the reader (e.g. in the subtitle of the plot). In addition, it clearly and explicitly describes the transformations to the reader (e.g. in the subtitle of the plot). (+1.5 points)	The visualization used an inappropriate set of data transformations (e.g. filtering out important outliers), or did not clearly describe these transformations to the reader. (+1 point)
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Annotations	<div style="border: 2px solid blue; padding: 10px; text-align: center;"> <h2>Remember our lectures on visual encodings!</h2> </div>		
Data Transformations	parts of the data. (+2.5 points)	The visualization uses appropriate data transformations (e.g. filtering, aggregating) and describes the transformations to the reader (e.g. in the subtitle of the plot). In addition, it	The visualization used an inappropriate set of data transformations (e.g. filtering out important parts of the data). (+1 points)
Writing	transformations, color palette, etc.). It also contains an overview of the development process. (+2 points)	misses in visualization missing.	
Creativity and Originality	The submission exceeds the assignment requirements, with original insights or particularly engaging visualizations. (up to +1 bonus point)	The submission meets the assignment requirements. (+0 points)	

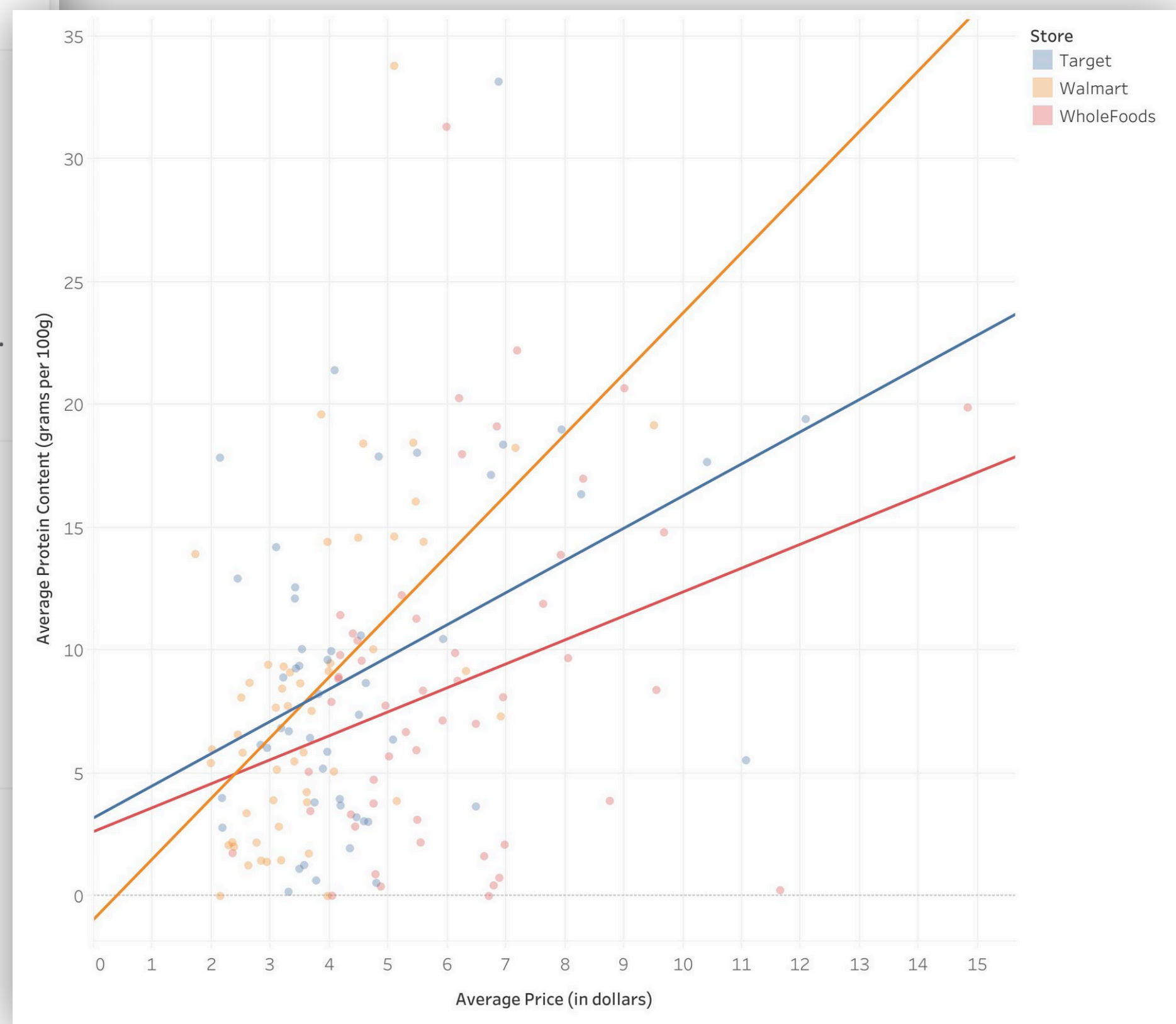
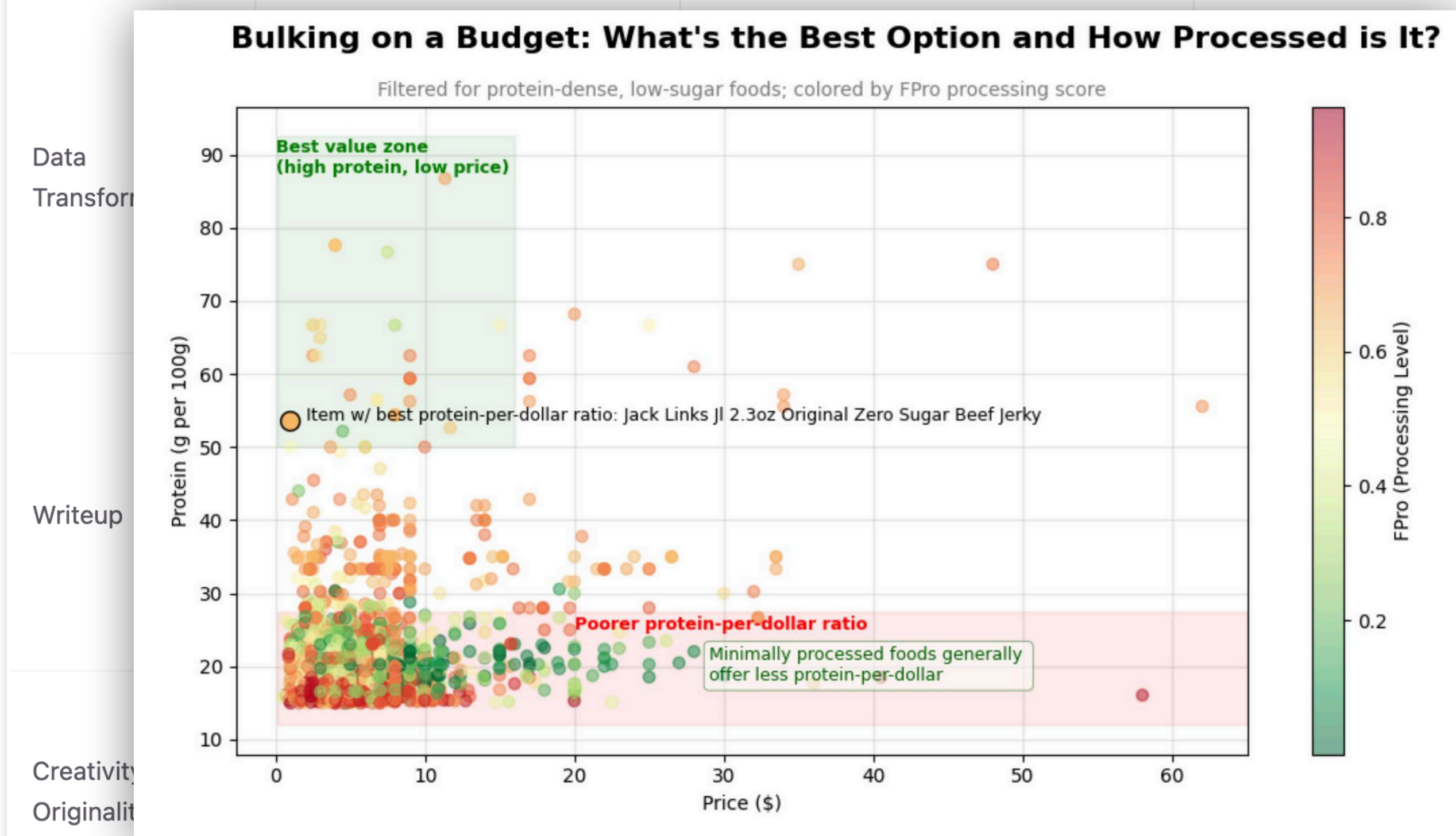
For example: avoid dual axis plots unless very well justified





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Most common issue last quarter was overplotting

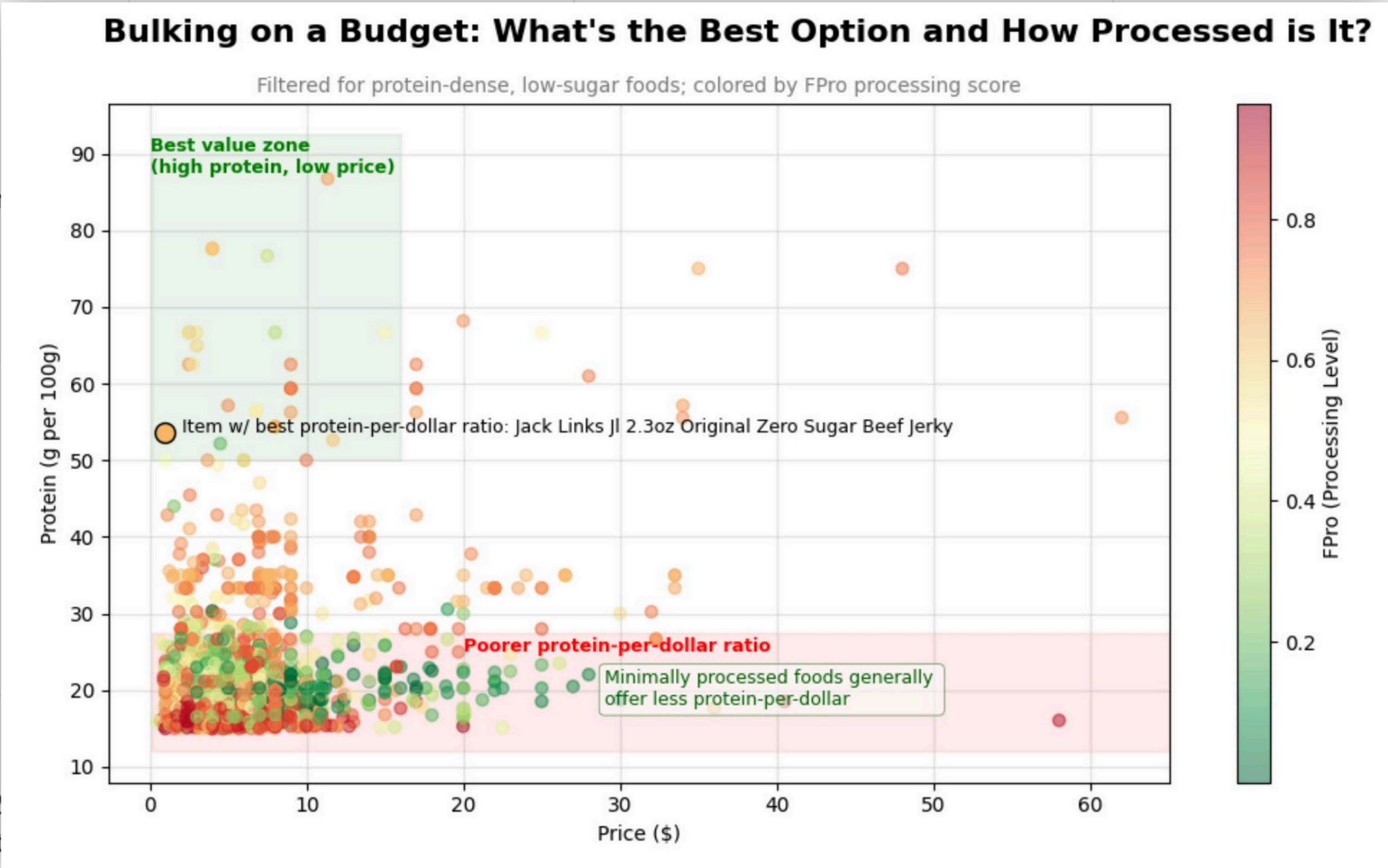


+1 bonus point)

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≥10 overlapping points will be considered overplotting. Think of alternate encodings!



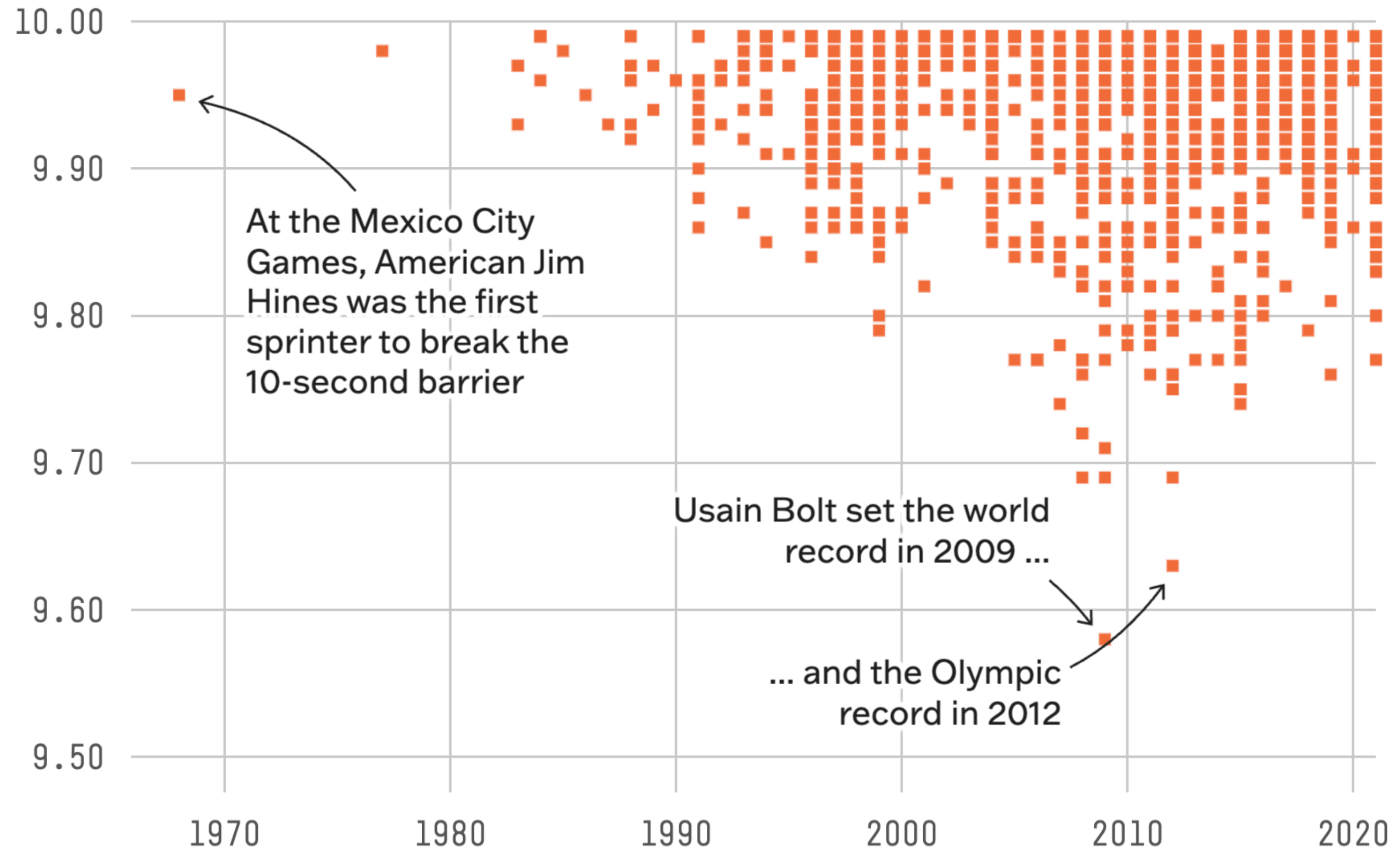
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Data Transformations	<p><b>Excellent:</b> Satisfactory + helpful annotations</p> <p><b>Satisfactory:</b> Interesting research question as title, axes have human-readable labels and units</p> <p><b>Not Satisfactory:</b> Missing required annotations</p>		
Writeup		rationale for its design decisions (e.g. the visual encodings, data transformations, color palette, etc.). It also contains an overview of the development process. (+2 points)	elements of the writeup has major issues (e.g. rationale misses important parts of the visualization design) or is missing. (+1 points)
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# Exemplar: Usain Bolt

## No one is coming close to Usain Bolt's best times

All times under 10 seconds in the outdoor men's 100-meter sprint, using only electronic readings and under regular wind conditions

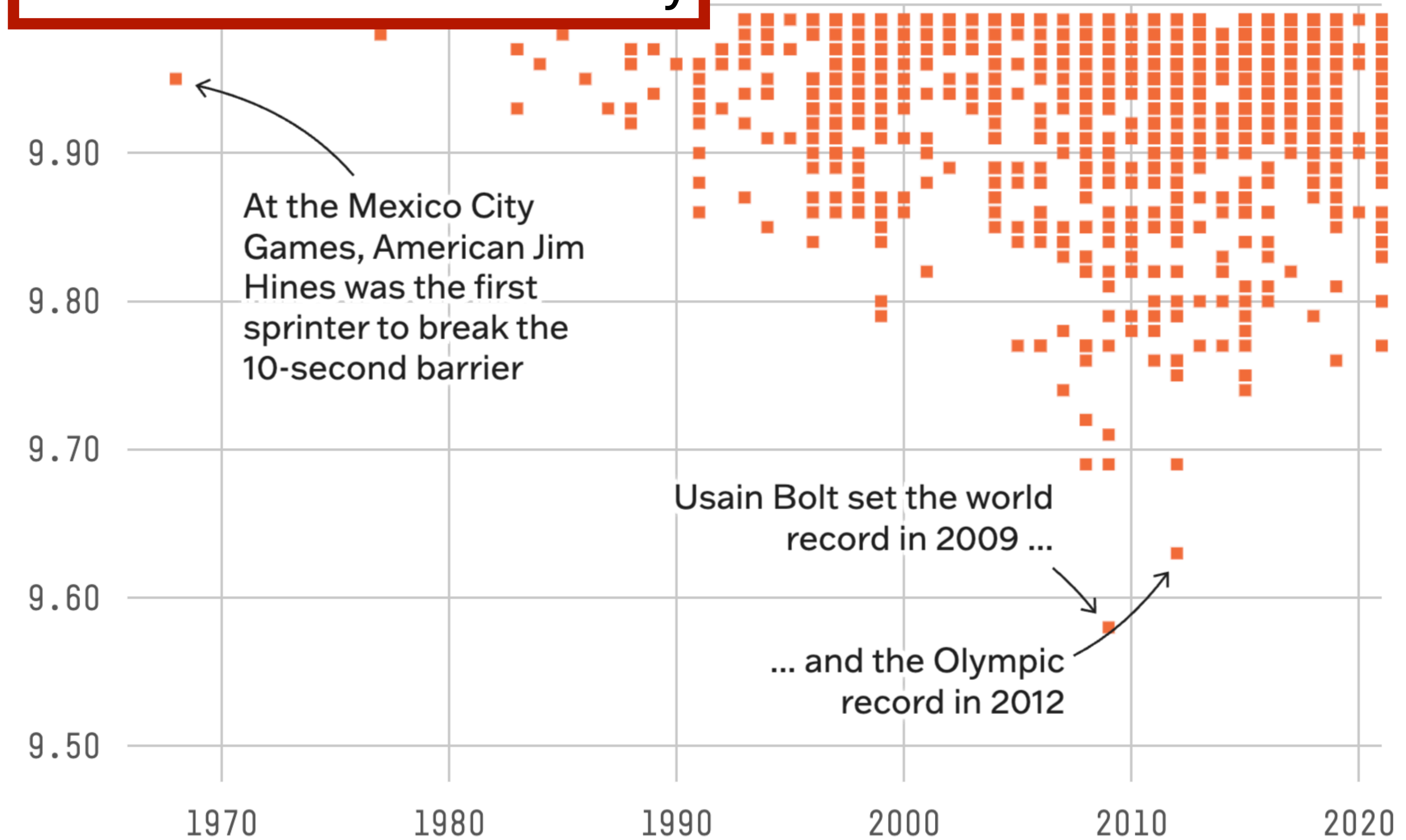


# Exemplar: Usain Bolt

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Time versus year for 100-meter sprints

Grade: Not satisfactory



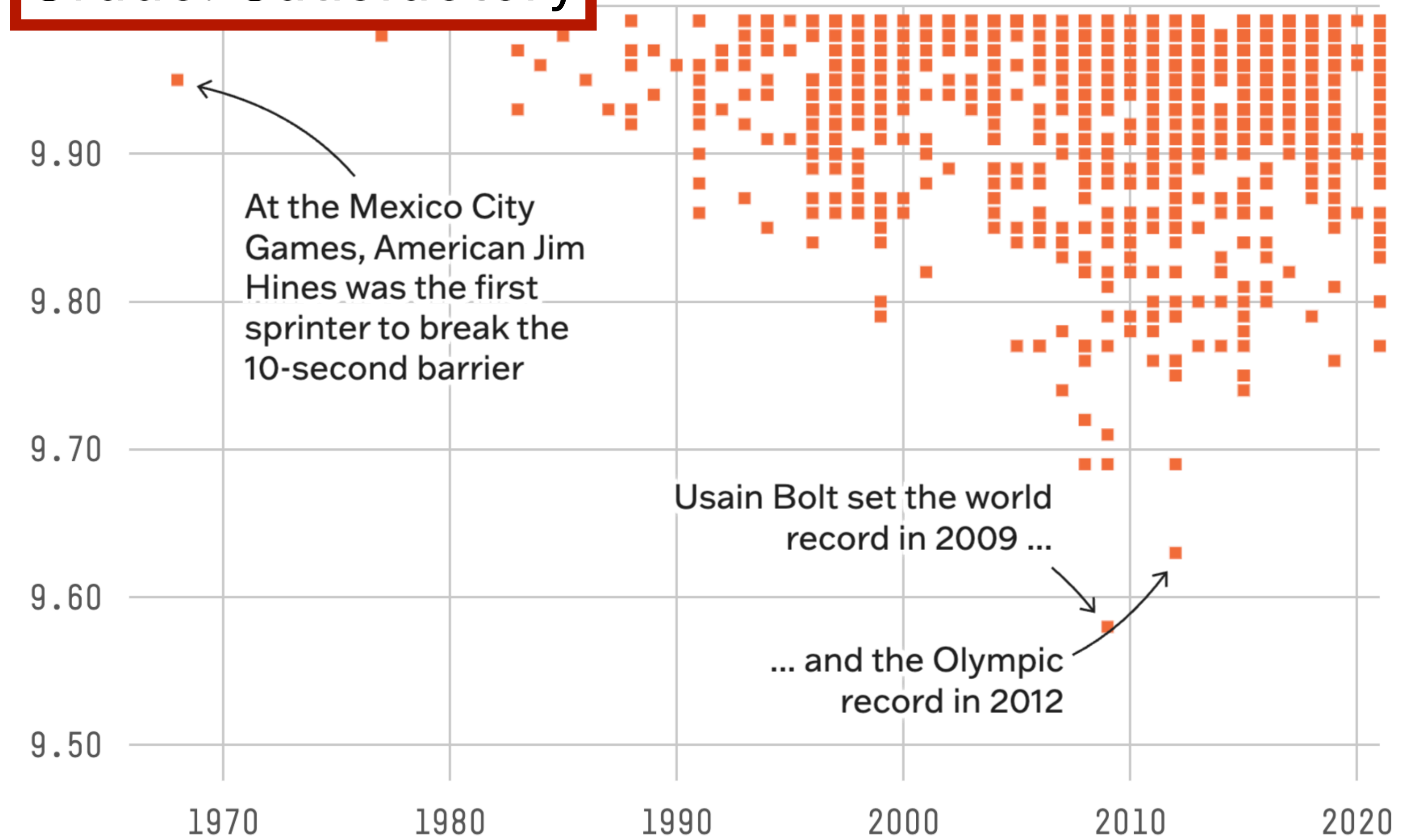
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How have 100m sprint times changed over time?

only electronic readings and under regular wind conditions

Grade: Satisfactory

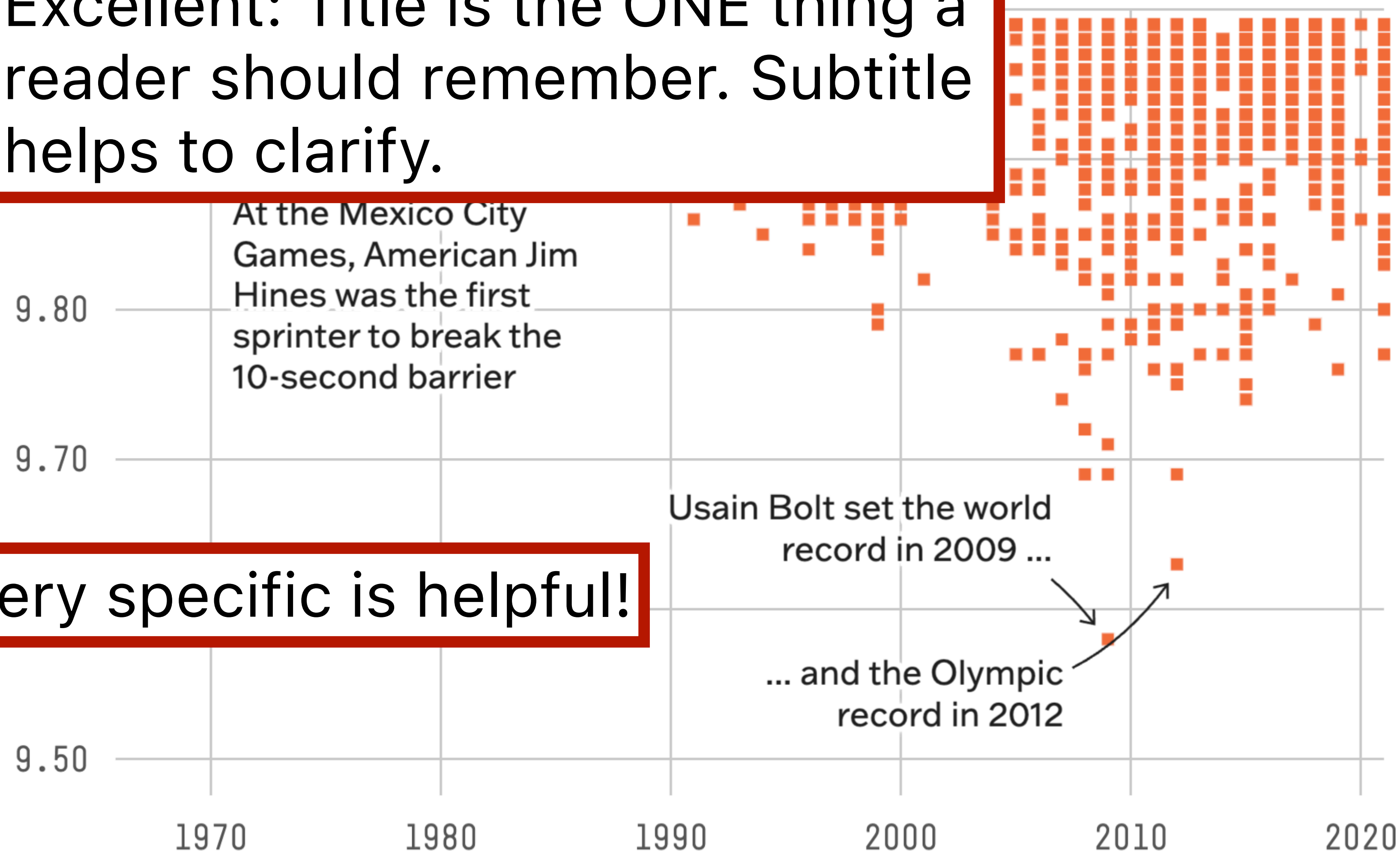


# Exemplar: Usain Bolt

## No one is coming close to Usain Bolt's best times

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Excellent: Title is the ONE thing a reader should remember. Subtitle helps to clarify.



Often, being very specific is helpful!

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**Must describe transformations in plot subtitle (e.g. aggregating, filtering etc.)**

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**Must describe visual encodings and why they are effective.**

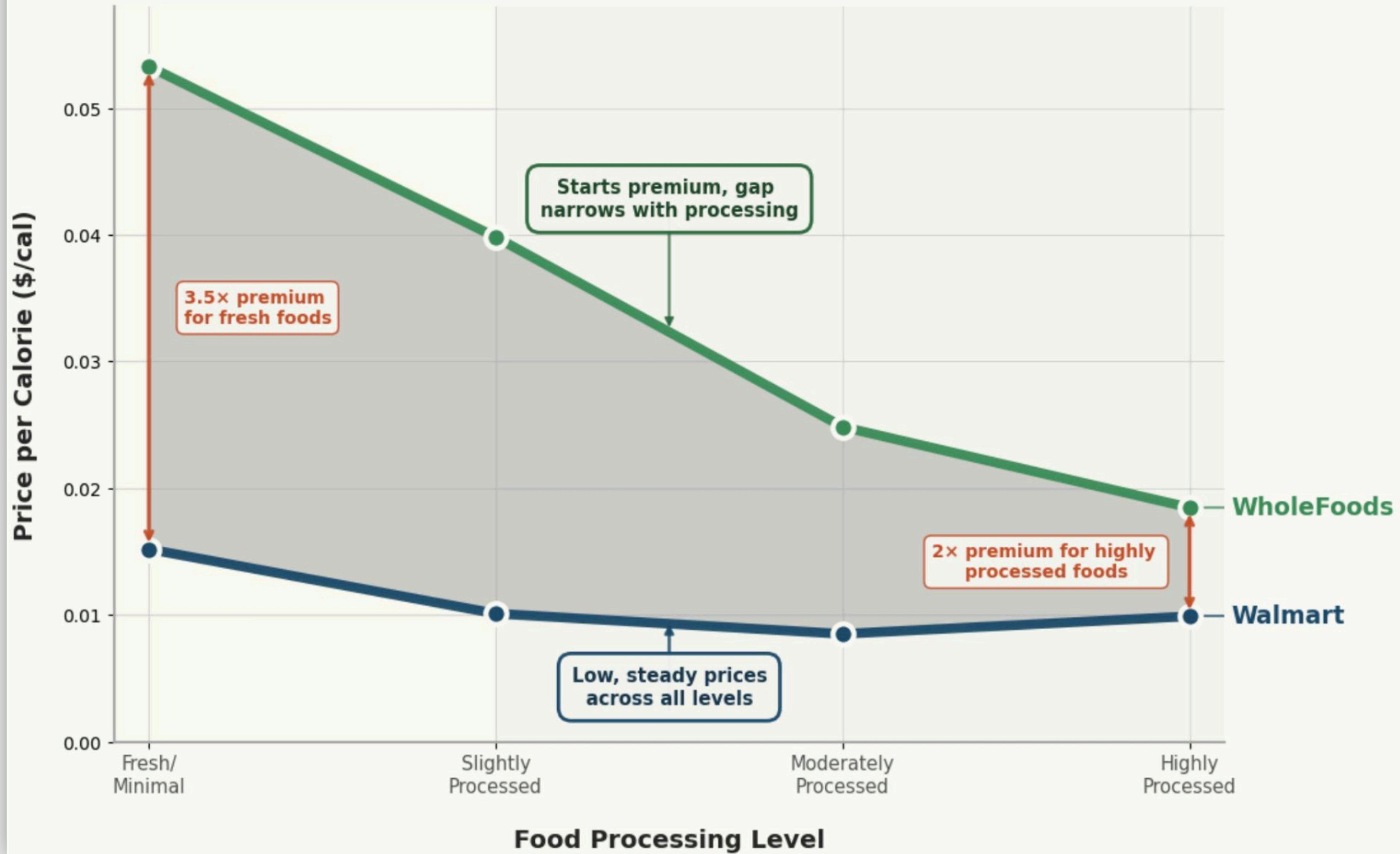
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**Get creative!**

# **Nifty Project 1 Submissions (from the past)**

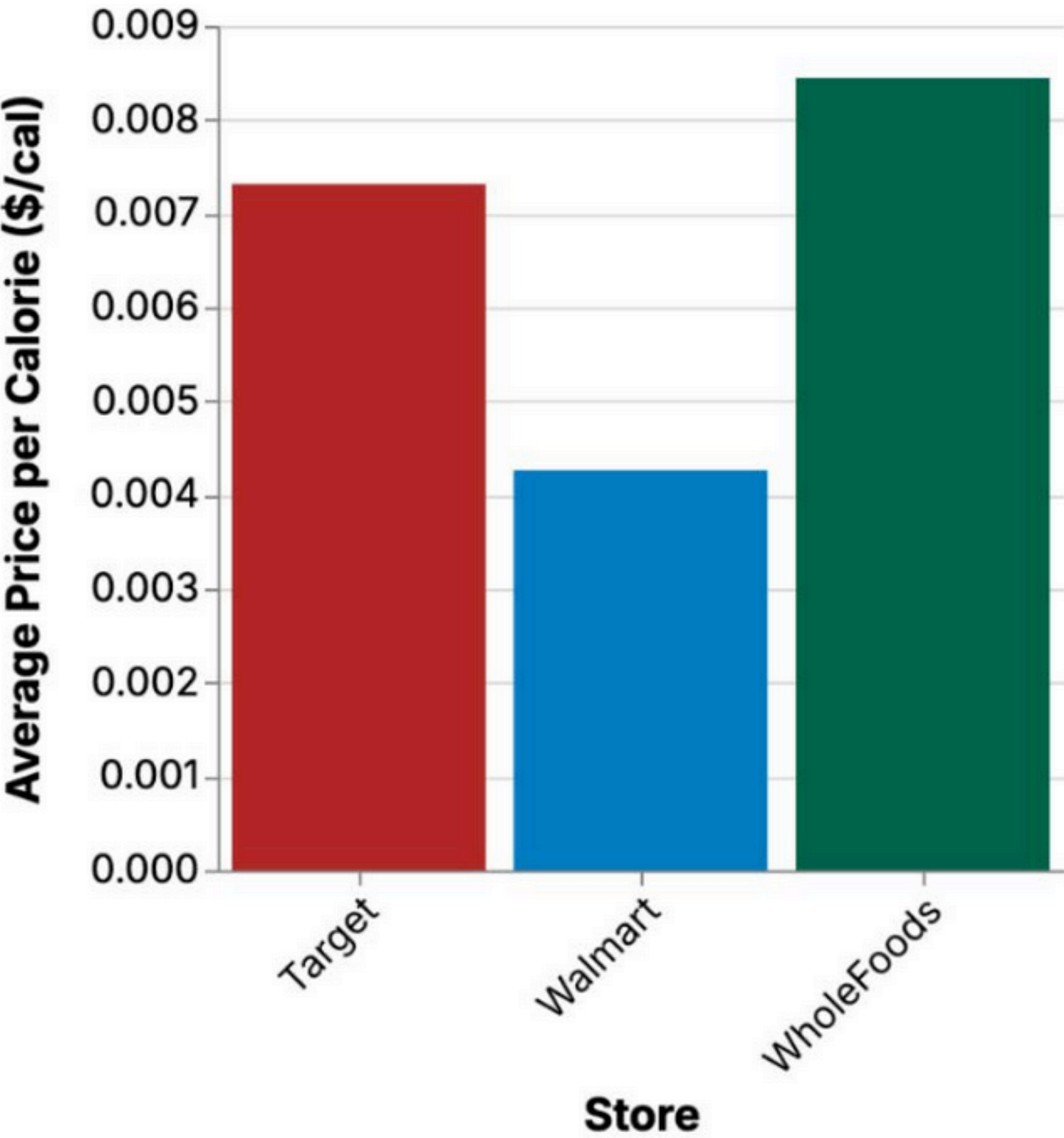
# The Fresh Food Premium: Does It Fade or Stay?

The price gap between premium and budget stores shrinks as food becomes increasingly processed.

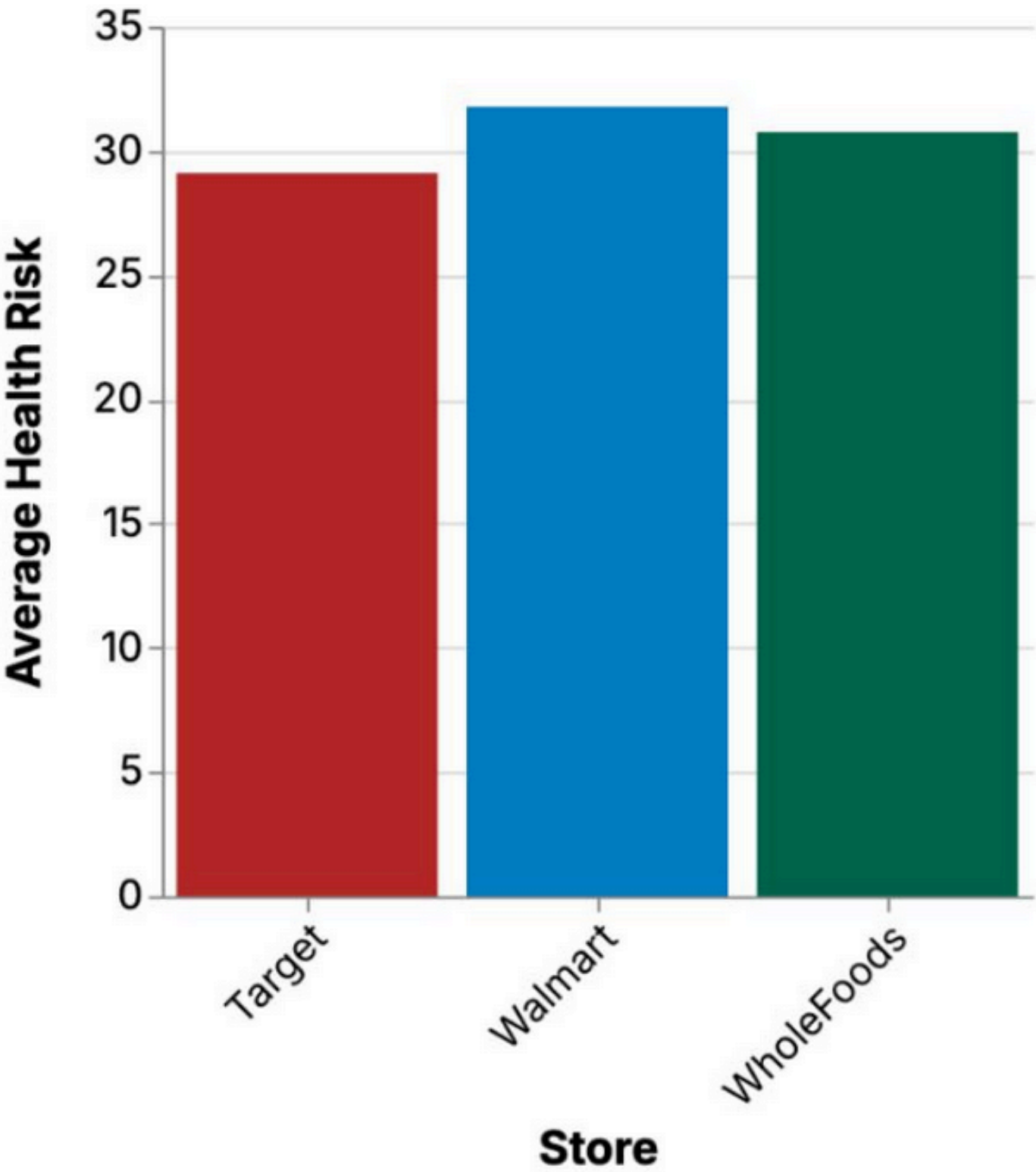


# Pizza Perplexion: WholeFoods pizzas are expensive and no healthier than their competitors

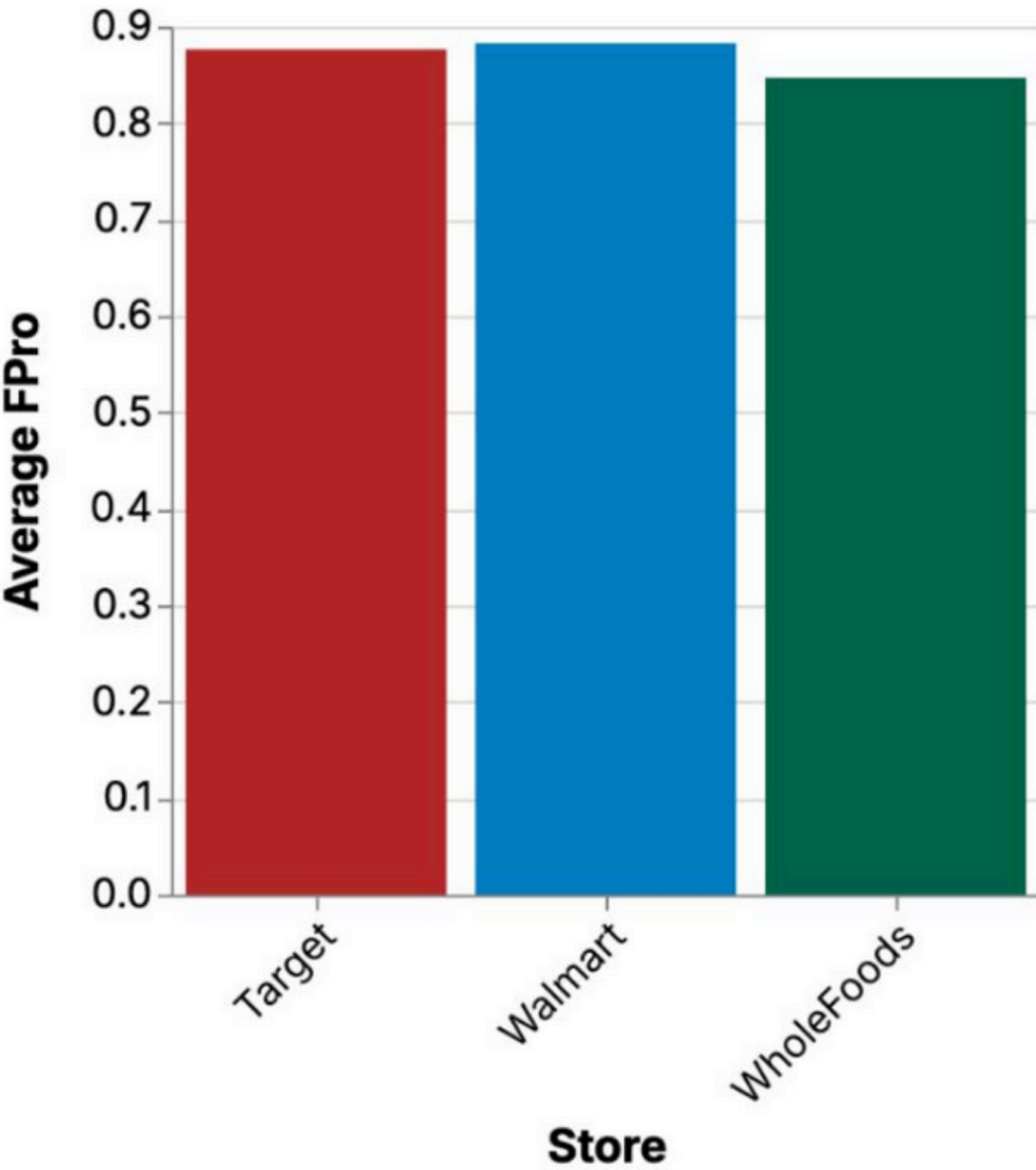
WholeFoods pizzas are on average the most expensive in price per calorie



While pizzas from all three stores have similar average health risk

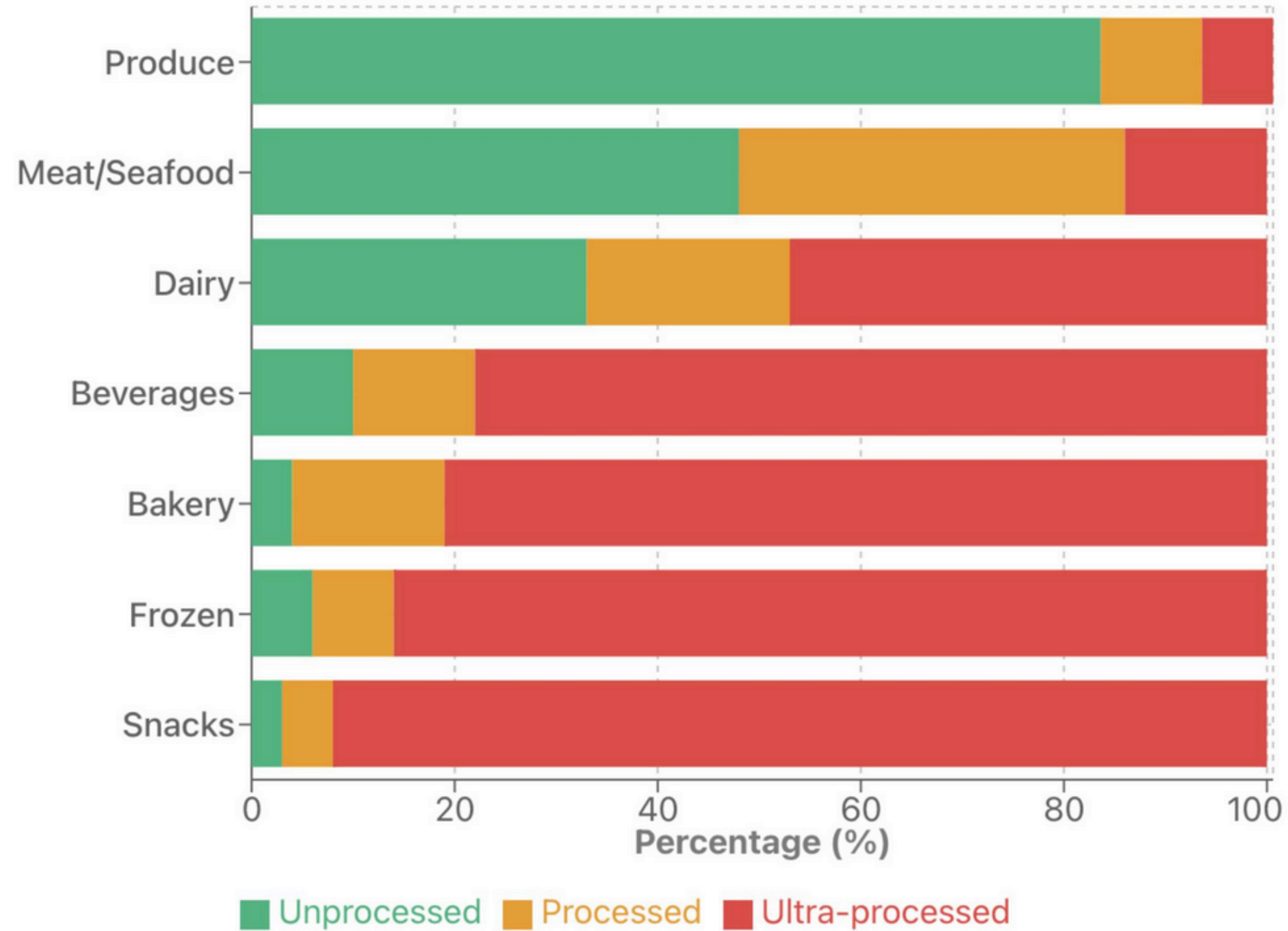


And similar average food processing scores




# Watch What You Buy: 67% of Grocery Store Food Is Ultra-Processed

Ultra-processed foods make up 5.6 times more of grocery store inventory than unprocessed foods. 75.8% of products are ultra-processed while the rest are minimally processed.



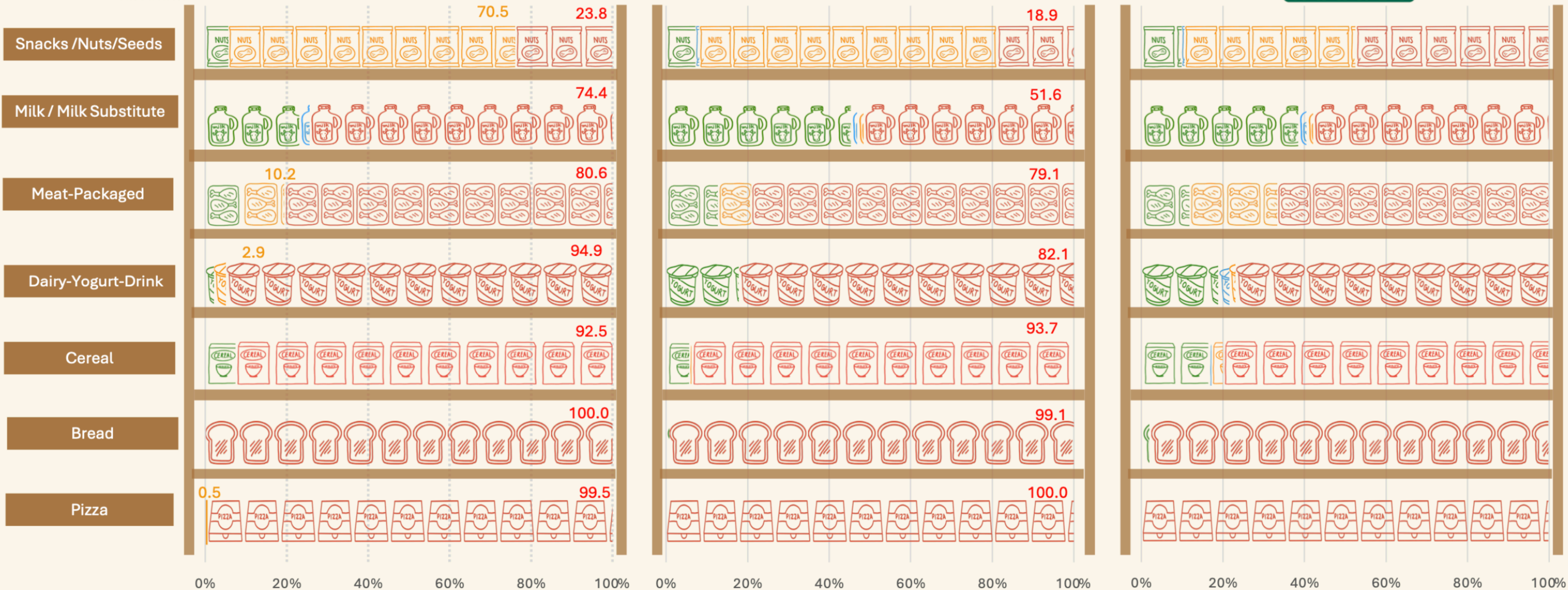
# Shelf of Health: Processing Paradox - Why Whole Foods Isn't Always Healthiest

## Comparing food processing levels across common grocery chains, by category

 Target has the highest percentage of ultra-processed options (74.4%), Milk/Milk substitute.



Whole Foods has MORE ultra-processed (47.5%) than Walmart (18.9%).



Class 0: Minimally Processed

Class 1: Lightly Processed

Class 2: Processed

Class 3: Ultra Processed



Walmart offers the MOST minimally processed milk options



Whole Foods offers more minimally processed cereal options (~16%) vs. Walmart/Target (~6-7%)