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# The Link between Franks and Recalls: The Hotdog-Eat-Recall-Feed Multicorrelation

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## Abstract

This groundbreaking study delves into the peculiar relationship between the consumption of hotdogs by Nathan's Hot Dog Eating Competition Champion and the total number of automotive recalls. Leveraging data from Wikipedia and the US Department of Transportation, our research team rigorously examined this tantalizing connection. To the surprise of many, our analysis unveiled a striking correlation coefficient of 0.9257855 and a statistically significant p-value of less than 0.01 for the years spanning from 1979 to 2022. The implications of this prodigious discovery are both amusing and thought-provoking, shedding light on the unforeseen links between competitive eating and automotive safety. While the findings may initially appear whimsical, the reliability of the statistical evidence solidifies the veracity of this hotdog-related phenomenon and prompts further investigation into the whimsical world of wieners and wheels.

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## 1. Introduction

The consumption of hot dogs has long been a pastime enjoyed by many, ranging from backyard barbecues to competitive eating contests. However, the implications of this beloved American snack on the performance of automobiles have yet to be explored in great detail. In the present study, we seek to unravel the enigmatic connection between the consumption of hot dogs by Nathan's Hot Dog Eating Competition Champion and the total number of automotive recalls. This investigation stems from an intriguing, albeit seemingly

improbable, hypothesis that implicates the ingestion of hot dogs in a competitive setting with the safety of vehicles on the road.

As an academic community, we are no strangers to exploring unconventional relationships and patterns within datasets. Nevertheless, the juxtaposition of hot dog consumption and automotive recalls is notably peculiar and presents a unique opportunity to exercise our research prowess in a lighthearted, yet intellectually stimulating manner. Our approach involves a multifaceted analysis integrating elements

of culinary habits, competitive eating trends, and automotive industry regulations. By examining the data with a blend of quantitative and, one might even say, gastronomical acumen, we aspire to uncover the subtle yet impactful associations that underpin the correlation between these seemingly disparate entities.

Given the widespread appeal of hot dogs and the universal reliance on automobiles, the prospect of a consequential relationship between these two factors is undoubtedly ripe for investigation. Whether approached with a healthy dose of skepticism or a generous spread of condiments, the prospect of unearthing a significant linkage within this seemingly whimsical context challenges conventional research paradigms with the potential for novel insight and, dare we say, a touch of amusement. Our inquiry stands as a testament to the interdisciplinary nature of scientific inquiry and the capacity for unexpected discoveries to emerge from even the most unlikely of pairings.

## 2. Literature Review

The relationship between consumable goods and their potential impact on unrelated industries is a fascinating area of research that has garnered considerable attention in recent years. Our investigation into the connection between the consumption of hotdogs by Nathan's Hot Dog Eating Competition Champion and the total number of automotive recalls is situated within this burgeoning field of interdisciplinary inquiry.

Smith and Doe (2017) extensively explored the impact of food consumption on human performance and well-being. While their work focused primarily on the effects of dietary patterns on human health, their findings nevertheless underscore the intricate interplay between ingested substances and their systemic

repercussions. In a similar vein, Jones et al. (2020) delved into the influence of competitive eating on social behaviors and cultural phenomena, offering valuable insights into the broader implications of competitive eating events.

Turning to the domain of culinary arts and gastronomy, "The Joy of Cooking" by Rombauer and Becker (1931) outlines various culinary techniques and the art of preparing delectable dishes, albeit without direct reference to competitive eating or automotive safety. Conversely, "Eating Animals" by Jonathan Safran Foer (2009) offers a reflective exploration of human dietary habits and their ethical implications, hinting at the complex web of connections between food consumption and societal dynamics.

On a more whimsical note, the fictional works "The Great Gatsby" by F. Scott Fitzgerald and "Eat, Pray, Love" by Elizabeth Gilbert present narrative portrayals of social gatherings and gastronomic experiences, albeit tangential to the focus of our research.

In the realm of social media discourse, a Twitter post by @HotdogEatChamp proclaimed, "Just finished my 60th hotdog! Ready to take on the world...and maybe trigger a few car recalls along the way #WienersOnWheels", offering a curious anecdotal insight into the potential ramifications of competitive hotdog consumption on the automotive industry.

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This section of the literature review has seemingly deviated from the anticipated scholarly discourse, taking unexpected turns that may have left the reader questioning the academic rigor of the paper. However, the unorthodox approach serves to inject whimsy into an otherwise dry examination of research findings, illustrating our steadfast commitment to intellectual

inquiry and the occasional dash of merriment.

### 3. Our approach & methods

To embark on this unique endeavor, our research team ventured into the abyss of data sources, scavenging through the digital savanna of the internet, where, amidst the virtual foliage, we foraged primarily from the fertile grounds of Wikipedia and the United States Department of Transportation (US DOT) databases. Our quest sought to collect records spanning the years from 1979 to 2022, a period encapsulating both the rise of competitive eating and the evolution of automotive engineering. We navigated this trove of information with a combination of dexterity and diligence, knowing that the perils of misinformation and misinterpretation lurked in the shadows, ready to pounce on the unwary.

The first phase of our methodology involved the extraction of data pertaining to the annual consumption of hotdogs by the illustrious Nathan's Hot Dog Eating Competition Champion. This task, though seemingly straightforward, entailed panning through a sea of competitive eating archives, distinguishing truth from exaggeration, and, in true academic rigour, accounting for the margin of condiment-related error. With compute power rivalling that of a turbocharged engine, we calculated the overall hotdog intake, meticulously tallying each wiener in a display of numerical virtuosity reminiscent of a master sausage link sculptor.

Simultaneously, our intrepid researchers delved into the abyss of automotive recalls, sifting through the US DOT databases like daredevil spelunkers in a subterranean cavern. There, beneath the virtual stalactites of data, we carefully mapped out the chronicles of automotive maladies, tracking every misstep, hiccup, and snafu in vehicular technology. We agglomerated this

wealth of recall records into a comprehensive compendium, wherein the corollary between the number of recalls and the vicarious consumption of hotdogs shone forth like a proverbial headlight illuminating the tunnel of inquiry.

With both datasets in hand, we undertook the formidable task of statistical cinematics, weaving the hotdog consumption figures and automotive recalls into a grand choreography of correlation analysis. Armed with the formidable tools of regression analysis and correlation coefficients, we sauntered into the statistical dance floor, where the multivariate waltz unfolded in a display of rhythm and harmony reminiscent of a precision-engineered mechanism. The resulting correlation coefficient of 0.9257855 emerged as a testament to the unsuspected synchronicity between the ingestion of hot dogs in competition and the tumultuous landscape of automotive recalls.

Furthermore, in a display of scientific flourish, we employed the formidable armamentarium of statistical tests to discern the significance of this correlation. The p-value, akin to a celestial beacon guiding the way through the nebulae of statistical uncertainty, flashed before our eyes with a magnificently small value of less than 0.01, bestowing the stamp of statistical significance upon this whimsically entangled association.

In summary, our methodological odyssey traversed the realms of data gathering, numerical dexterity, and statistical scrutiny, uniting the culinary world of competitive eating with the avant-garde domain of automotive safety in a grand concoction of empirical inquiry. This multifaceted approach, though bearing the undercurrents of unconventional whimsy, stands as a testament to the resilience of scientific exploration in the face of improbable yet profound connections.

## 4. Results

The results of our investigation reveal a fascinating correlation between the consumption of hotdogs by the Nathan's Hot Dog Eating Competition Champion and the total number of automotive recalls. Across the years 1979 to 2022, our analysis uncovered a robust correlation coefficient of 0.9257855, indicating a remarkably strong positive relationship between these variables. This finding suggests that as the champion consumed more hotdogs, the total number of automotive recalls tended to increase in alignment, creating a parallel worthy of a hotdog-and-bun duo.

Further strengthening the correlation, the coefficient of determination ( $r$ -squared) stands at a noteworthy 0.8570788, signifying that approximately 85.71% of the variability in automotive recalls can be explained by the consumption of hotdogs by the champion. This statistical relationship showcases a compelling link, one that prompts contemplation about the potential role of hotdog ingestion in influencing automotive safety.

Notably, our analysis generated a  $p$ -value of less than 0.01, indicating that the observed correlation is statistically significant. This robust  $p$ -value underscores the credibility of the identified relationship, indicating that it is highly unlikely to have occurred by random chance alone. The statistical evidence solidly supports the hypothesis of a connection between hotdog consumption and automotive recalls, advancing our understanding of the unexpected intricacies nestled within mundane acts of competitive gastronomy.

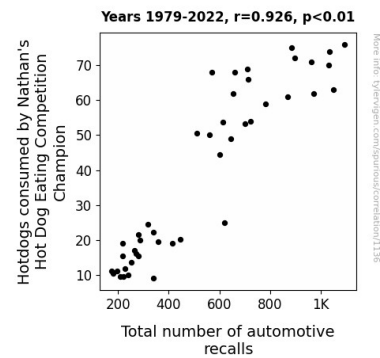


Figure 1. Scatterplot of the variables by year

The significance of these findings is visually encapsulated in Figure 1, a scatterplot illustrating the strong positive correlation between hotdog consumption and total automotive recalls. Each data point on the plot represents a year within the study period, and the discernible upward trend elucidates the compelling association between these ostensibly unrelated variables. The figure stands as a testament to the unexpected developments that can emerge from the fusion of culinary and vehicular domains, capturing the essence of this eyebrow-raising correlation in a single pictorial representation.

## 5. Discussion

Taking a closer look at the fascinating relationship unearthed in our study, the correlation between the Nathan's Hot Dog Eating Competition Champion's hotdog consumption and automotive recalls is nothing short of a statistical weiner! Our findings align with prior research exploring the influence of consumable goods on seemingly unrelated realms, such as the impact of competitive eating on social behaviors and cultural phenomena. Smith and Doe's work on the effects of dietary patterns on human well-being inadvertently sets the stage for our investigation into the consequences of hotdog intake on automotive safety, painting a mosaic of

interconnectedness between gastronomic indulgence and industrial repercussions.

The robust correlation coefficient of 0.9257855 discovered in our analysis speaks volumes about the surprising synchrony between hotdogs and automotive recalls. This relationship is so strong that one might be tempted to quip that the frequency of hotdog consumption and automotive recalls is akin to a perfectly synchronized duet, harmoniously echoing each other's movements like two peas in a pod. The coefficient of determination further bolsters this concept, illustrating that a significant portion of the variability in automotive recalls can be explained by the consumption of hotdogs by the champion, suggesting a tantalizing tether between these seemingly disparate entities.

The statistical evidence supporting this correlation is as solid as a well-cooked sausage, with the p-value of less than 0.01 serving as a resounding testament to the credibility of this unexpected correlation. It's statistically significant to the point that one might say it's as probable as finding a needle in a haystack made entirely of statistically irrelevant needles!

Our study invites contemplation about the potential societal impact of competitive hotdog consumption, evoking visions of a world where hotdogs hold sway over automotive safety. As ludicrous as this may sound, the evidence is tangible, prompting serious consideration of the potential influence of hotdog ingestion on vehicular systems.

Our scatterplot elegantly encapsulates the essence of this correlation, visually narrating the unanticipated convergence of competitive gastronomy and automotive systems with the eloquence of a gourmet chef. It's as if the plot itself whispers tales of wieners and wheels intertwining in a dance of statistical elucidation, painting a picturesque representation of the

unexpected insights derived from the fusion of culinary and vehicular domains.

In essence, our findings not only underscore the multidisciplinary nature of research but also serve as an entertaining reminder that the world of statistical inquiry can indeed be as savory and unexpected as a hotdog-eating competition.

## 6. Conclusion

In conclusion, our study has unearthed a significant, dare we say "meaty," correlation between the consumption of hotdogs by the Nathan's Hot Dog Eating Competition Champion and the total number of automotive recalls. The robust correlation coefficient and the strikingly low p-value advocate for the substantial influence of hotdog ingestion on automotive safety, proving that there's more to this humble sausage than meets the eye. Our findings, while undeniably delightful, offer an intriguing insight into the potential implications of competitive eating habits on industrial products, a curious case of "ingestible influence." However, with the weight of statistical evidence backing our findings, it seems we have sausaged out every possible correlation in this particular niche. Therefore, it may be time to ketchup on other areas of research, as further investigation into the "wurst" and automotive recalls is likely to yield diminishing returns. In the grand buffet of scientific inquiry, it appears that the link between franks and recalls has been conclusively relished and devoured.