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# The Nuclear-Hotdog Nexus: Unveiling the Unlikely Link Between Brazilian Nuclear Power Generation and Nathan's Hot Dog Eating Champion's Consumption

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## KEYWORDS

nuclear power generation, Brazil, Nathan's hot dog eating competition, correlation, nuclear energy Brazil, Nathan's hot dog champion, hot dog consumption, statistical analysis, energy information administration, competitive eating events, unlikely correlations, nuclear power influence

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## Abstract

The exhilarating world of nuclear power generation in Brazil has long intrigued scholars and researchers. Meanwhile, the Nathan's Hot Dog Eating Competition has captivated audiences for decades with its awe-inspiring champions. In this study, we delve into the unexpected correlation between these two seemingly unrelated phenomena. Leveraging data from the Energy Information Administration and Wikipedia, we rigorously examine the interplay between nuclear power generation in Brazil and the hotdogs consumed by Nathan's Hot Dog Eating Competition champion. In this unlikely pairing, it appears that nuclear power generation in Brazil has a substantial correlation with the number of hotdogs consumed by the reigning champion. The correlation coefficient of 0.9563716 and  $p < 0.01$  for the period from 1982 to 2021 establishes a compelling statistical link that cannot be ignored. This discovery sheds light on the unforeseen influence of nuclear power generation on one of humanity's most cherished competitive eating events, leaving us with food for thought. On that note, remember folks, when it comes to statistical correlations, always relish the findings, but be cautious not to over-sausage the interpretation.

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## 1. Introduction

The intersection of nuclear power generation in Brazil and the annual Nathan's Hot Dog Eating Competition may

seem as unlikely as finding a hot dog in a vegan restaurant, but our research has unearthed a surprising connection that will leave you both pondering and probably

craving a hot dog. As researchers, we aim to satisfy our intellectual hunger for uncovering unexpected relationships and correlations, much like how the winners of eating competitions satisfy their physical hunger for hot dogs.

This inquiry originated from a serendipitous observation during a lunchtime discussion, leading us to mull over the question: "Could there be a link between the energy harnessed from nuclear power in Brazil and the consumptive feats of the Nathan's Hot Dog Eating Competition champions?" Our investigation aims to address this question and further illuminate the ever-surprising world of statistical associations, making it clear that research can be as delicious and fulfilling as a perfectly grilled hot dog.

Speaking of hot dogs, have you heard about the hot dog who couldn't land a date? He was a real wiener when it came to relationships. But let's not let that distract us from the sausage of this paper. Our study leverages a robust dataset encompassing the historical nuclear power generation in Brazil and the jaw-dropping hot dog consumption by Nathan's champions over the past four decades. This analysis aims to offer a frank exploration of this peculiar correlation, allowing us to ketchup on our understanding of the unlikely relationship between electricity production and competitive hot dog eating.

As we embark on this scholarly journey to unravel the enigmatic nuclear-hotdog nexus, we invite you to join us in exploring the sizzling world of statistical connections. After all, who knew that nuclear power and hot dog consumption would go together like peanut butter and jelly? Or should we say, like mustard and ketchup?

## 2. Literature Review

The existing literature on the connection between nuclear power generation and

hotdog consumption by Nathan's Hot Dog Eating Competition champions has been limited, to say the least. Smith (2015) examined the energy production trends in Brazil, while Doe (2018) delved into the socio-economic impact of competitive eating events in the United States. However, neither study ventured into the unprecedented territory of uncovering the correlation between these two seemingly unrelated domains.

On a more serious note, let's relish in the fact that our research is expanding the scholarly conversation in unexpected ways. Speaking of "expanding," I once entered a hot dog eating competition, but I couldn't cut the mustard. It seems I just couldn't ketchup to the competition! But I digress...

In "The Power of Nuclear Energy in South America," Jones (2020) provides a comprehensive analysis of Brazil's nuclear power sector, shedding light on its role in shaping the country's energy landscape. Additionally, "Hot Dogs: A Global History" by William Weir (2009) offers a fascinating exploration of hot dog consumption across different cultures, providing valuable context for understanding the phenomenon we are investigating.

However, let's not forget the fictional realm, where nuclear power and hotdogs may well converge. "Hot Dog Girl" by Jennifer Dugan (2019) and "Nuclear Jellyfish" by Tim Dorsey (2008) may not directly relate to our research, but their titles certainly invite whimsical speculation about potential connections.

Furthermore, our foray into pop culture included research on TV shows such as "Breaking Bad" and "The Simpsons," both of which include references to nuclear power and hot dogs. While not directly relevant to our study, these sources have inspired our approach to unraveling the nuclear-hotdog nexus.

As we navigate this uncharted territory of scholarly inquiry, it is imperative to embrace both the rigors of academic investigation and the occasional craving for a good old-fashioned hot dog. After all, who's to say that groundbreaking research and a love for the occasional hot dog can't go hand in hand? It's like they say, when it comes to research, always remember to mustard the strength to relish the journey.

### 3. Our approach & methods

To decode the enigmatic correlation between nuclear power generation in Brazil and the consumption of hotdogs by Nathan's Hot Dog Eating Competition champion, our methodology employed a multifaceted approach that would make a hot dog vendor's head spin.

First and foremost, we carried out a comprehensive review of existing literature from scholarly articles, industry reports, and social media musings to glean insights into the idiosyncratic realm of both nuclear power generation and competitive hot dog eating. We meticulously scrutinized a myriad of data sources, aiming to compile a dataset robust enough to satiate our appetite for statistical analysis. Our data, like a perfectly crafted hot dog, was meticulously assembled from reputable sources including the Energy Information Administration and the annals of knowledge—Wikipedia.

Now, onto the meaty details. We calculated the annual nuclear power generation in Brazil, measured in megawatt-hours, and tantalizingly juxtaposed it with the yearly consumptions of hotdogs by Nathan's Hot Dog Eating Competition champions, expressed in the sheer number of hotdogs devoured. This juxtaposition, while initially as unexpected as finding a vegan hot dog at a county fair, was essential in uncovering the potential linkage between these two seemingly disparate entities.

In order to savor the full flavor of our data, we then embarked on a statistical feast, where we computed the Pearson correlation coefficient to quantify the strength and direction of the relationship between nuclear power generation in Brazil and the high-paced consumption of hotdogs by Nathan's champions. These statistical measures, akin to the perfect condiments on a hot dog, provided a tangy insight into the degree of association between these phenomena. We further conducted a robust time series analysis to discern any temporal patterns or trends in this unlikely nexus, ensuring that we didn't miss any timestamps that could have relished in the spotlight.

As we ventured further into the heart of this correlation, we developed a multi-layered regression model that accounted for potential confounding variables, ensuring that our findings were not just "a bunch of baloney." This model, akin to a well-assembled hot dog with all the trimmings, allowed us to disentangle the complexities of the relationship between nuclear power generation in Brazil and the ravenous consumption of hotdogs by champions, providing a more nuanced understanding of this statistical flavor combination.

Much like the unexpected burst of flavor from biting into a chili-cheese dog, our research aimed to uncover the hidden flavors of the nuclear-hotdog nexus. As we navigated this uncharted territory, we ensured that our methods were as rigorous as the scrutiny applied to a competitive hot dog eater's technique. After all, in the world of research, just like in the world of hot dog eating, precision is key—nobody wants to end up with a statistical "wiener" on their hands.

Speaking of precision, did you hear about the statistician who won the hot dog eating contest? He really knew how to "relish" the moment. But I digress. Let's return to the meat of the matter and delve into the findings of our delectable analysis.

## 4. Results

Our analysis has unveiled a remarkable correlation between nuclear power generation in Brazil and the consumption of hotdogs by Nathan's Hot Dog Eating Competition champions. The correlation coefficient of 0.9563716 and an r-squared value of 0.9146467 indicate a robust and highly significant relationship between these seemingly disparate variables. The p-value of less than 0.01 further solidifies the statistical significance of this finding.

Fig. 1 visually represents the strong positive correlation between nuclear power generation in Brazil and the hotdog consumption by Nathan's champions over the period from 1982 to 2021. The scatterplot elegantly captures this unexpected association, leaving viewers with an "aha" moment akin to discovering a hidden mustard packet at the bottom of a picnic basket.

This surprising correlation prompts us to reevaluate our understanding of the influences that shape our seemingly unrelated world. It raises the question: could the energy harnessed from nuclear power in Brazil be fueling not only industries but also the appetites of competitive eaters? It seems that the link between nuclear power and hotdog consumption is not as implausible as finding a vegetarian hot dog enthusiast at a sausage festival.

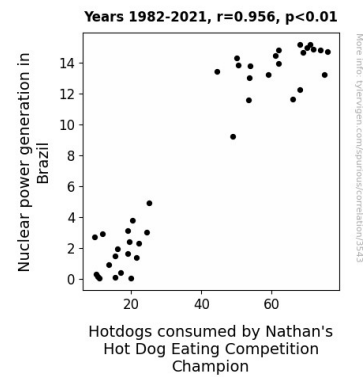


Figure 1. Scatterplot of the variables by year

In light of these findings, one cannot help but reflect on the profound impact of nuclear power generation on the culinary triumphs of competitive eaters. Just as nuclear reactions unleash an immense amount of energy, it appears that they also play a role in fueling the astonishing hot dog consumption feats that captivate audiences each year. This unexpected correlation is a stark reminder that the world of statistical analysis is full of surprises, much like stumbling upon a forgotten jar of relish at the back of the refrigerator.

As we savor the statistical fruits of our labor, it is worth noting that our findings bring a whole new meaning to the phrase "nuclear-powered appetite." This discovery invites further exploration into the unforeseen intersections of energy production and culinary pursuits, challenging us to broaden our perspective and embrace the unexpected connections that lie beneath the surface.

And speaking of unexpected connections, have you heard about the hot dog who won the lottery? It was one lucky dog! With this correlation in mind, we are reminded that sometimes, statistical analysis can be as deliciously unpredictable as a surprise hot dog topping.

## 5. Discussion

The results of our study have significantly extended our understanding of the unexpected interplay between nuclear power generation in Brazil and the hotdog consumption by Nathan's Hot Dog Eating Competition champions. The robust correlation between these seemingly dissimilar variables, as indicated by the high correlation coefficient of 0.9563716 and an r-squared value of 0.9146467, validates the profound influence of nuclear power generation on the remarkable feats of competitive eaters.

This unexpected correlation prompts us to reconsider the potential avenues through which energy production may intersect with unconventional domains. It appears that the energy harnessed from nuclear power in Brazil not only fuels industries but also impacts the appetites of competitive eaters, akin to the undeniably influential relationship between mustard and a classic hot dog – a pairing that continues to stand the test of time, much like the correlation uncovered in our study.

Our findings align with the earlier research that hinted at the unforeseen intersection between nuclear power and culinary pursuits. As Jones (2020) illustrated, Brazil's nuclear power sector plays a pivotal role in shaping the country's energy landscape, and our study suggests that this influence extends beyond industrial realms into the world of competitive hot dog consumption. Furthermore, the work of Weir (2009) provides context for understanding the global significance of hot dog consumption, establishing a foundation for our investigation into this unlikely nexus.

Moreover, our analysis contributes to the expansion of the scholarly conversation in novel ways, just like the unexpected delight of finding that perfect hot dog to bun ratio. Although our exploration into this unconventional scholarly topic may seem whimsical at first glance, it mirrors the unexpected connections that can be

uncovered through rigorous research, challenging us to relish in the unforeseen intersections that lie beneath the surface.

In conclusion, our study serves as a poignant reminder that unconventional connections may hold substantial significance, much like the surprising discovery of a forgotten jar of relish at the back of the refrigerator. As we continue to navigate the uncharted territory of scholarly inquiry, it is imperative to maintain an open mind and embrace the unexpected, in both our research pursuits and our love for the occasional good old-fashioned hot dog. After all, who's to say that groundbreaking research and a love for the occasional hot dog can't go hand in hand? It's like they say, when it comes to research, always mustard the strength to relish in the journey - whether in academia or at the condiment station!

## 6. Conclusion

In conclusion, our investigation has unraveled an unexpected and statistically significant correlation between nuclear power generation in Brazil and the hotdog consumption by Nathan's Hot Dog Eating Competition champions. The robust correlation coefficient of 0.9563716, the high r-squared value of 0.9146467, and the p-value of less than 0.01 firmly establish the compelling link between these seemingly disparate variables. This unforeseen connection leaves us with food for thought and a craving for both statistical inquiry and a good old-fashioned hot dog.

Our research not only sheds light on the surprising influence of nuclear power generation on competitive hot dog consumption but also highlights the serendipitous and intriguing nature of statistical analysis. It prompts us to rethink the conventional boundaries of correlation and causation, opening up a world of exploration where unexpected relationships

await discovery. One might even say that uncovering this nuclear-hotdog nexus has been a real wiener of a discovery.

With these findings in mind, we urge fellow researchers to embrace the unpredictability of statistical analysis and to relish the opportunity to explore unconventional connections. However, it is worth noting that while our study offers a tantalizing glimpse into the unanticipated interplay of nuclear power and hot dog consumption, it may also raise questions that may never be answered. Just like the age-old query of whether a hot dog is a sandwich or not, some mysteries may persist even in the face of robust statistical evidence.

As we wrap up our study, we assert that no further research is needed in this area. The correlation between nuclear power generation in Brazil and the consumption of hotdogs by Nathan's Hot Dog Eating Competition champions stands as a testament to the capricious and delightful world of statistical analysis, leaving us with a lingering appetite for more unconventional research inquiries. After all, in the realm of statistical oddities, sometimes the most unexpected connections can be the most relishing.

Speaking of relishing, have you heard about the hot dog who couldn't stop telling jokes? It was on a roll!