# Engineering Enrollment and Economic Endeavors: Exploring the Enigmatic Link between Bachelor's Degrees and Dollar Store Searches 

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#### Abstract

This study delves into the peculiar relationship between the number of Bachelor's degrees awarded in Engineering and the frequency of Google searches for "dollar store near me." Using data from the National Center for Education Statistics and Google Trends, our research team sets out on an intellectually playful journey to uncover the enigmatic connection between these seemingly disparate domains. We employed statistical analysis to unveil a striking correlation coefficient of 0.9900033 and a p-value less than 0.01 for the period spanning from 2012 to 2021. Our findings challenge conventional wisdom, unfolding an unexpected interplay between academic pursuits and consumer behavior. The implications of this study extend beyond academic curiosity, providing a whimsical lens through which to explore the intricate tapestry of human decision-making in the digital age.


In the colorful landscape of academic inquiry, one might not immediately envision a connection between the awarding of Bachelor's degrees in Engineering and the frantic quest for dollar stores. However, as Carl Sagan famously said, "Somewhere, something incredible is waiting to be known." In this case, that something incredible happened to be the peculiar correlation between these two seemingly unrelated phenomena. Our study aims to unravel this perplexing relationship, armed with the powerful tools of statistical analysis and an unwavering sense of curiosity.
As we venture into uncharted territories of research, it is essential to acknowledge the whimsical nature of this undertaking. Much like a mad scientist in a lab full of test tubes, we find ourselves concocting a hypothesis that may seem preposterous at first glance. Nevertheless, as intrepid explorers of the academic realm, we remain undaunted in our
pursuit of truth, no matter how unconventional the path may seem.

The field of statistics, much like a magician, holds the power to reveal hidden patterns and unveil the unexpected. In this study, we harness the magic of numbers to cast a spell of correlation between the number of Engineering degrees and the fervor of dollar store searches. As we conjure up scatter plots and regression analyses, we find ourselves in the midst of a great intellectual spectacle, where the mundane dance of data points transforms into a captivating display of statistical wizardry.

But let us not lose sight of the gravity of our quest amidst the whimsy of statistical theatrics. The implications of uncovering a meaningful connection between educational attainment and consumer behavior are profound. This discovery provides a unique vantage point from which to contemplate the
intricate dance of supply and demand, human aspirations, and economic realities. As the poet Robert Frost mused, "Two roads diverged in a wood, and I-I took the one less traveled by." In our case, the road less traveled has led us to the intersection of academia and economics, where the unexpected convergence of variables paves the way for a delightfully unconventional pursuit of knowledge.

## LITERATURE REVIEW

In "Smith et al.," the authors find a significant positive correlation between the number of Bachelor's degrees awarded in Engineering and the frequency of Google searches for "dollar store near me." This surprising linkage piqued our curiosity and prompted a comprehensive exploration of the existing literature in this domain.

Turning to serious non-fiction works, "Freakonomics" by Steven D. Levitt and Stephen J. Dubner sheds light on the unexpected relationships that underpin economic behavior. While the book may not specifically delve into the correlation between Engineering degrees and dollar store searches, its examination of unconventional economic patterns provides a thought-provoking backdrop for our investigation. Additionally, "The Wealth of Nations" by Adam Smith furnishes a foundational understanding of economic principles, albeit without offering direct insights into our peculiar research question.

On a fictional note, the whimsical world of "Charlie and the Chocolate Factory" by Roald Dahl offers a satirical glimpse into consumer behavior and the allure of inexpensive merchandise. Although the novel may be more concerned with the magical inner workings of a chocolate factory, its portrayal of human desire and consumer culture adds a playful dimension to our research theme. Furthermore, the dystopian landscapes of "Brave New World" by Aldous Huxley prompt contemplation of societal structures and individual
choices, albeit in a context unrelated to dollar store inquiries.

Venturing further into the realm of unconventional sources, we encountered rather atypical material. Amidst the seemingly ordinary fabric of everyday life, we discovered an unexpected treasure trove of insight: CVS receipts. These enigmatic slips of paper, with their cryptic list of purchases and tantalizing discount offers, provided an unorthodox yet oddly informative glimpse into consumer spending habits. While perhaps not the most rigorous scholarly material, their unintentional humor and accidental commentary on consumerist tendencies offered a lighthearted diversion in our research journey.

As we navigate this uncharted academic terrain, the juxtaposition of serious scholarship and whimsical exploration serves as a poignant reminder of the unpredictable delights that await those who venture beyond the confines of traditional inquiry. In blending the rigors of academia with the levity of unexpected connections, our pursuit of knowledge assumes a playfully enigmatic quality, mirroring the very mystery we seek to unravel.

## METHODOLOGY

In our quest to unravel the enigmatic connection between Bachelor's degrees awarded in Engineering and Google searches for "dollar store near me," we embarked on a whimsical journey through the data landscape, employing a mix of serious statistical analysis and lighthearted curiosity. Our research team gathered data from the National Center for Education Statistics, capturing the annual counts of Bachelor's degrees conferred in Engineering from 2012 to 2021. Meanwhile, our digital adventurers delved into the realm of Google Trends, extracting the search interest data for "dollar store near me" across the same timeframe.

With our treasure trove of data in hand, we set out to wrangle the numbers into submission, much like a crew of fearless pirates charting an unexplored statistical sea. Our first task was to assess the
quality and integrity of the data, ensuring that our findings would not be marred by inaccuracies or outliers. After confirming the reliability of our data, we proceeded to don our statistical thinking caps and unleash an arsenal of analytical methods.

To shed light on the relationship between Engineering degrees and dollar store searches, we called upon the venerable Pearson correlation coefficient to quantify the strength and direction of the association. Harnessing the power of this trusty statistic, we sought to illuminate the potential link between the academic pursuits of aspiring engineers and the curious clamor for budget-friendly shopping destinations.

In our statistical revelry, we also subjected our data to the time-tested ritual of regression analysis, summoning forth a parade of coefficients and significance tests to tease out the finer nuances of the relationship. With each coefficient acting as a star performer in our statistical circus, we aimed to uncover the intricate interplay between our covariates and decipher the underlying narrative of human behavior as it unfolds in the dance of numbers.

In addition to these time-honored statistical methods, we also employed the prodigious talents of time series analysis to capture the dynamic ebb and flow of Engineering degrees and dollar store searches over the years. This approach allowed us to unravel the temporal tapestry of our variables, painting a vivid picture of their coiling embrace and unveiling any seasonally nuanced patterns in their interwoven tales.

As we navigated through the seas of data, we maintained a rigorous commitment to transparency and reproducibility, documenting our analytical escapades with meticulous precision. Through the alchemy of statistical inquiry and whimsical exploration, we sought to breathe life into the seemingly disparate worlds of academia and consumer behavior, weaving a narrative that challenges conventional wisdom and invites the reader to embrace the unexpected.

## RESULTS

The results of our statistical analysis revealed a remarkably strong correlation between the number of Bachelor's degrees awarded in Engineering and the frequency of Google searches for "dollar store near me" over the period from 2012 to 2021. The correlation coefficient of 0.9900033 suggests a near perfect positive linear relationship between these two seemingly unrelated variables. Our findings indicate that the increase in Engineering degrees awarded is highly associated with an uptick in the quest for dollar stores.

The r-squared value of 0.9801066 further emphasizes the robustness of this relationship, explaining a substantial $98.01 \%$ of the variability in dollar store searches based on the number of Engineering degrees conferred. It seems that as the pursuit of engineering knowledge flourishes, so too does the fervent exploration for affordable treasures at the nearest dollar store.

In line with these compelling results, the p-value of less than 0.01 provides strong evidence against the null hypothesis, indicating that the observed association between Engineering degrees and dollar store searches is not due to random chance. It appears that there is indeed a significant and meaningful connection between educational achievements in Engineering and the inclination to embark on a digital quest for budget-friendly shopping destinations.


Figure 1. Scatterplot of the variables by year
Furthermore, our Figure 1 scatterplot graphically depicts this captivating relationship, capturing the undeniable correlation between the variables in a visually engaging manner. Like two celestial bodies in orbit, the points in the scatterplot gracefully align themselves along a trajectory that mirrors the dance of knowledge and consumer behavior, painting a vivid portrait of the interconnectedness between the pursuit of higher education and the search for economic bargains.

In conclusion, our research sheds light on the unanticipated interaction between academic aspirations and consumer habits, proving that statistical analysis can indeed uncover intriguing patterns that defy traditional expectations. This revelation invites further contemplation on the economic undercurrents that underpin human decision-making and offers a whimsical perspective on the intricate tapestry of human behavior in the digital age.

## DISCUSSION

Our research has unveiled a surprisingly strong and statistically robust connection between the conferral of Bachelor's degrees in Engineering and the frequency of Google searches for "dollar store near me." The near-perfect positive linear relationship with a correlation coefficient of 0.9900033 stands as a testament to the unexpected interplay between these seemingly unrelated variables. It appears that as the pursuit of engineering knowledge flourishes, so too does the fervent exploration for affordable treasures at the nearest dollar store.

Harkening back to the literature review, our findings support the work of "Smith et al.," who also identified a significant positive correlation between Engineering degrees and dollar store searches. While the whimsical world of "Charlie and the Chocolate Factory" may have initially seemed like an unlikely source of inspiration, its satirical glimpse into consumer behavior ultimately resonates with our results. After all, who wouldn't
want to find the golden ticket to the nearest dollar store bargain?

The robustness of our findings, as indicated by the $r$-squared value of 0.9801066 , suggests that a substantial $98.01 \%$ of the variability in dollar store searches can be explained by the number of Engineering degrees awarded. This statistical prowess provides a compelling narrative of the captivating relationship between educational achievements in Engineering and the inclination to embark on a digital quest for budget-friendly shopping destinations. As "Freakonomics" has taught us, the unconventional is often nestled within the folds of the ordinary - just like the unexpected connection we have uncovered in our research.

In line with the quirky diversions encountered in our literature review, our results have introduced an unconventional yet oddly informative glimpse into consumer spending habits. Much like the enigmatic CVS receipts, our findings carry a touch of unintentional humor and provide valuable insight into the unpredictable delights that await in the realm of statistical exploration.

It is evident that our study offers a whimsical perspective on the intricate tapestry of human behavior, serving as a poignant reminder of the unpredictable delights that emerge when the rigors of academia intersect with the playful enigmas of unconventional inquiry. As we delve further into this uncharted academic terrain, the intersection of serious scholarship and lighthearted exploration mirrors the delightfully mysterious nature of the very correlation we seek to unravel.

In summary, our findings contribute to the whimsical tapestry of human decision-making, offering a unique lens through which to examine the economic undercurrents that underpin consumer behavior. Our statistical analysis has uncovered a correlation that defies traditional expectations, emphasizing that serious inquiry can indeed lead to delightfully unexpected - yet statistically robust discoveries.

## CONCLUSION

In the grand tradition of scientific discoveries that elicit a hearty chuckle, our investigation into the link between Bachelor's degrees in Engineering and Google searches for 'dollar store near me' has not disappointed in its whimsical revelations. Just as Newton's apple fell from the tree, our statistical analysis has unveiled a delightful cascade of data points that connect the pursuit of engineering knowledge with the fervent hunt for dollar store treasures.

Our findings, with a correlation coefficient of 0.9900033, have unmasked an almost comically strong relationship between these seemingly unrelated variables. It seems that as the number of bright minds delving into the world of Engineering increases, so does the collective urge to embark on a digital quest for budget-friendly shopping destinations. It's as if the allure of affordable knickknacks and the thrill of differential equations share a harmonious waltz within the human psyche.

The r-squared value of 0.9801066 reaffirms this captivating relationship, painting a statistical portrait of the entwined paths of academic pursuits and consumer whims. The p-value of less than 0.01 further solidifies the significance of this discovery, leaving no room for doubt that the connection between Engineering degrees and dollar store searches is not a product of statistical randomness but a genuine correlation that tickles the fancy of the scholarly mind.

In the grand finale of our statistical spectacle, our scatterplot, akin to a cosmic ballet, captures the beautiful dance of knowledge and consumer behavior, offering a visual testament to the harmonious convergence of these unconventional bedfellows.

In closing, our journey has unveiled a whimsical landscape where the pursuit of higher education and the search for economic bargains intertwine in an enigmatic pas de deux. The implications of this improbable correlation are as intriguing as they are captivating, providing a humorous lens through
which to ponder the intricate tapestry of human behavior in the digital age.

As for further research on this topic, we dare proclaim that no more investigation is needed. For in the fun-filled realms of statistical exploration, sometimes the most unexpected correlations are the ones that bring the most joy-and that, dear reader, is a statistical certainty.

