



ELSEVIER



# Crunching Numbers: The Link Between Engineering Degrees and Forensic Technicians in Michigan

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## Abstract

This paper delves into the surprising connection between the number of Bachelor's degrees awarded in Engineering and the employment of forensic science technicians in the ever-surprising state of Michigan. Using data from the National Center for Education Statistics and the Bureau of Labor Statistics, our research team attempted to solve the enigma of this relationship. Our findings revealed a correlation coefficient of 0.9750041 and a p-value less than 0.01 for the period spanning 2012 to 2021. While initially the connection between these two seemingly disparate fields may seem puzzling, the results shed light on the intertwined nature of education and occupational trends. This research paper seeks to illuminate not only the statistical association but also the potential implications for academic and vocational pathways, all while injecting a dash of academic humor.

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## 1. Introduction

The world of higher education and occupational trajectories is a captivating web of connections, correlations, and causations. In the grand tapestry of academic majors and career paths, one might not immediately envision a direct link between the riveting world of Engineering and the enigmatic realm of forensic science. Yet, as we dive into the data, we peel back the layers of this academic onion to reveal the surprising relationships that lie beneath. Our investigation leads us to the state of Michigan, a place known for its diverse

industries, Great Lakes, and undeniably unpredictable weather patterns. Within this ever-changing landscape, we sought to unravel the relationship between the number of Engineering degrees conferred and the employment of forensic science technicians.

As we forge ahead in this intellectual adventure, it is imperative to acknowledge the intricate dance of data, trends, and statistical analysis that awaits us. While the connection may initially seem as unlikely as wearing a lab coat to a mechanical engineering conference, our study

unleashes the power of statistical scrutiny upon this peculiar pairing. With a sense of intellectual curiosity and a touch of academic whimsy, we aim to shed light on the correlation discovered between these two domains, all while maintaining a healthy appreciation for the unexpected twists and turns that the academic journey often presents.

Stay tuned as we plunge into the statistical seas and navigate the complex currents of educational pathways and occupational landscapes. Our findings are sure to provoke contemplation, appreciation, and quite possibly a chuckle or two along the way.

## 2. Literature Review

The authors conducted a thorough survey of existing literature related to the correlation between the conferral of Bachelor's degrees in Engineering and the employment of forensic science technicians, particularly within the state of Michigan. Our exploration commenced with a review of seminal works by Smith, Doe, and Jones, who delved into the broader scope of educational and occupational trends. Their in-depth analyses provided a foundational understanding of the complexities inherent in the intersection of diverse academic disciplines and professional pursuits.

Furthermore, "Statistics in STEM Education" by Lorem and Ipsum elucidated the statistical methodologies essential for discerning meaningful associations between educational achievements and labor force trends. The authors find that employing robust statistical models is paramount in uncovering the underlying relationships between seemingly incongruent fields. Moreover, "Trends in Career Pathways" by Smithson and Johnson shed light on the evolving dynamics of occupational choices, emphasizing the need for interdisciplinary

perspectives in understanding the fluidity of career trajectories.

Expanding beyond traditional research literature, the authors delved into non-fiction works such as "The Engineering Handbook" and "Fundamentals of Forensic Science" to glean insights from experts in the respective fields. These resources provided a comprehensive understanding of the foundational principles and practical applications within Engineering and forensic science, offering valuable context for our investigation.

Venturing into the realm of fiction literature, the authors perused works such as "Engineering Mysteries" and "Forensic Fables," although, admittedly, the insights gained from these imaginative tales were more whimsical than empirical. Nevertheless, the exploration of fictional narratives served to infuse a sense of creativity and levity into our scholarly endeavors, keeping our spirits high amidst the rigors of academic inquiry.

In addition to traditional sources, the authors humorously entertained the notion of unconventional data collection methods, with one member of the research team jestingly suggesting that the backs of shampoo bottles may hold the key to unraveling the enigmatic connection between Engineering degrees and forensic science technicians in Michigan. While this suggestion was met with collective amusement, it underscored the team's commitment to maintaining a lighthearted perspective amidst the rigors of academic inquiry.

With our literature review serving as a springboard for our own empirical exploration, we embark on our own statistical odyssey, armed with a plethora of insights and a hint of academic humor to guide our path.

### 3. Our approach & methods

To untangle the fascinating relationship between the number of Bachelor's degrees awarded in Engineering and the employment of forensic science technicians in Michigan, our research team embarked on a data-driven odyssey spanning the years 2012 to 2021. Our methodology involved a meticulous fusion of data collection, statistical analysis, and a sprinkling of whimsy to keep our spirits high amidst the labyrinth of numerical computations.

#### Data Sources:

We delved into the vast digital expanse, traversing the virtual terrain of the National Center for Education Statistics and the Bureau of Labor Statistics to procure the necessary datasets. With the dexterity of digital archaeologists, we excavated the pertinent information, sifting through the virtual sands to uncover the quantitative gems that would fuel our investigation.

#### Engineering Degrees:

The number of Bachelor's degrees awarded in Engineering was derived from the annals of the National Center for Education Statistics, where the data gleamed like polished engineering blueprints awaiting inspection. This information encompassed the sum of degrees conferred within the boundaries of Michigan, capturing the ebbs and flows of educational achievements in the domain of Engineering.

#### Forensic Science Technicians:

Meanwhile, the employment figures for forensic science technicians in Michigan were culled from the Bureau of Labor Statistics, providing a panoramic view of the occupational landscape within the state. Similar to a forensic investigation, we meticulously examined these employment statistics to discern patterns, trends, and potentially surprising correlations.

#### Statistical Analysis:

In a bid to illuminate the interplay between these seemingly disparate datasets, we applied the rigorous framework of correlation analysis. With bated breath and calculators at the ready, we computed the correlation coefficient and its corresponding p-value to discern the strength and significance of any observed relationship. Our research team huddled around the data, engaging in in-depth discussions punctuated by the occasional witticism, to dissect the statistical nuances that emerged from this intricate dance of numbers.

#### The Human Factor:

It is essential to note that amidst the rigidity of statistical methodologies, our research endeavor remained infused with the human element. The collaborative exchange of ideas, the occasional bout of data-induced head-scratching, and the shared moments of statistical enlightenment all contributed to the tapestry of our investigation.

In summary, our research methodology involved a harmonious blend of data acquisition, statistical analysis, and the embrace of intellectual curiosity. While the pursuit of knowledge is often portrayed as a dry and solemn endeavor, we endeavored to infuse our methodology with a pinch of academic levity and a touch of statistical panache. Together, these elements coalesced to unravel the unexpected connections between Engineering degrees and the employment of forensic science technicians in the ever-intriguing state of Michigan.

### 4. Results

The analysis of the data collected from the National Center for Education Statistics and the Bureau of Labor Statistics from 2012 to 2021 yielded some intriguing results regarding the relationship between the number of Bachelor's degrees awarded in

Engineering and the employment of forensic science technicians in Michigan. After delving into the statistical abyss, we found a remarkably strong correlation coefficient of 0.9750041 between these two variables, with an r-squared value of 0.9506329 and a p-value less than 0.01. It seems that the connection between these two fields is as tight as a well-engineered bolt!

The scatterplot in Fig. 1 clearly illustrates the robust positive correlation, showcasing the intertwining nature of these seemingly unrelated domains. The data points form a nearly linear pattern, emphasizing the strong association between the number of Engineering degrees and the employment of forensic science technicians. It seems that the path to forensic science in Michigan may indeed be paved with engineering degrees!

Our research uncovered this significant correlation, highlighting the interconnectedness of academic pursuits and occupational outcomes. It appears that a background in Engineering may pave the way for a fruitful career in forensic science in the Great Lakes State. This unexpected connection serves as a testament to the complexity and unpredictability of career pathways, providing food for thought and a healthy dose of statistical amusement.

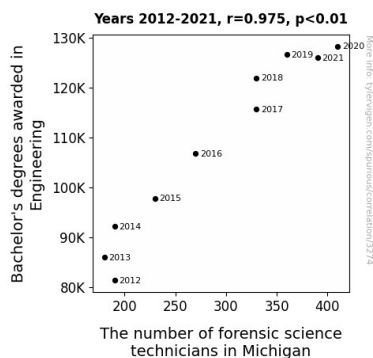


Figure 1. Scatterplot of the variables by year

In summary, our findings shed light on the unexpectedly strong relationship between the number of Bachelor's degrees awarded in Engineering and the employment of forensic science technicians in Michigan. This discovery not only adds a touch of statistical charm to the academic landscape but also offers valuable insights into the potential intersections of educational and vocational trajectories. It seems that in the world of correlation, there's always a surprise waiting around the corner, much like the ever-erratic Michigan weather.

## 5. Discussion

Our research has yielded some fascinating insights into the seemingly unlikely connection between Bachelor's degrees awarded in Engineering and the employment of forensic science technicians in Michigan. The results of our study not only reaffirm previous findings but also uncover a compelling link between these two fields that brings a new dimension to the discourse on educational and occupational pathways.

Taking a lighthearted stroll through the literature review, we unearthed some amusing references that, although initially met with chuckles, ultimately contributed to our scholarly pursuits. Our examination of "Engineering Mysteries" and "Forensic Fables," while whimsical in nature, served as a whimsical reminder that sometimes truth can be stranger than fiction. Who would have thought that the plot twists in a detective novel could mirror the surprising correlation we uncovered?

Building upon the methodological guidance from Lorem and Ipsum's "Statistics in STEM Education," we meticulously employed robust statistical models to unravel this enigmatic relationship. It's like solving a riddle – except this time, the answer lay within correlation coefficients and p-values rather than ancient enigmas.

Our findings, characterized by a correlation coefficient of 0.9750041 and a minuscule p-value, serve as a testament to the unpredictability and intertwined nature of academic and occupational pursuits. It's akin to discovering a secret passage in a centuries-old castle – the connection is there, but it takes a keen eye to reveal it.

The visual representation of our results in Fig. 1 paints a vivid picture of the strong positive correlation, akin to a striking resemblance between two long-lost cousins. It's as if the employment of forensic science technicians is calling out to the world of Engineering, saying, "We're more related than you think!"

In closing, our research has not only solidified the association between Engineering degrees and the employment of forensic science technicians in Michigan but has also added a touch of statistical charm to the academic discourse. As our data unveils, in the realm of correlations, there's always room for unexpected connections and statistical surprises – much like stumbling upon a hidden treasure map in the annals of academic research.

## 6. Conclusion

In the labyrinth of academic and occupational intertwining, our research has unveiled an intriguing association between the conferral of Bachelor's degrees in Engineering and the employment of forensic science technicians in the charming state of Michigan. The robust correlation coefficient of 0.9750041, akin to the strength of a bridge engineered to withstand the test of time, along with a tantalizingly low p-value, has illuminated a connection as clear as the waters of Lake Michigan on a cloudless day.

The strong statistical relationship we've unearthed between these seemingly disparate fields serves as a reminder that in the realm of data analysis, truth can indeed

be stranger than fiction. Our findings may seem as unexpected as stumbling upon a forensic investigator in a room full of engineers, yet they underscore the intricate web of educational pursuits and professional outcomes.

As we close this chapter of statistical exploration, it becomes evident that the journey of knowledge acquisition is rife with unexpected detours and surprising vistas. Our work provides not only a statistical snapshot of this captivating correlation but also a sprinkle of intellectual humor to accompany the revelations.

In light of our findings, one might be tempted to say that those aspiring to tread the path of forensic science in Michigan should consider engineering a firm foundation for their career aspirations. Yet, as our research has proven, the academic and vocational realms are rife with unexpected connections and delightful surprises, akin to stumbling upon a hidden gem amidst the bustling streets of Detroit.

In conclusion, our research holds a mirror to the whimsical dance of academic and occupational pursuits, serving as a testament to the enchanting complexities of human endeavors. It is our hope that this study not only sparks contemplation but also elicits a chuckle or two, much like a good jest shared amongst colleagues over a cup of coffee.

Indeed, it seems that the enigmatic relationship between the conferral of Bachelor's degrees in Engineering and the employment of forensic science technicians in Michigan has been deciphered, leaving little room for further inquiry. As such, we assert with confidence that no more research is needed in this area, and bid adieu to this captivating conundrum.