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CIS611HOS1P2024 - Introduction to Business Analytics

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Unit 6: Discussion

Visualizing Impact: Ethical Data Presentation and Storytelling

Introduction

In the data-rich landscape we navigate today, the true power lies not in the numbers themselves but in the stories they can tell. I was captivated by the makeover "From Dashboard to Story" on the Storytelling with Data (SWD) Makeovers page, which brilliantly illustrates this concept. This example is a guiding light for transforming dense data into compelling narratives that command action and drive change (ESSELMAN, 2022).

Why I Selected "From Dashboard to Story" - [Link](#)

Throughout my time analyzing data to spot fraudulent activity, I have honed my skills in dissecting complex information to reveal key trends and valuable insights. The "[From Dashboard to Story](#)" transformation featured by Storytelling with Data is a perfect example of what I aim to accomplish: crafting data into stories that are informative and influential, guiding the decisions of those who rely on my analysis (Cotgreave, n.d.).

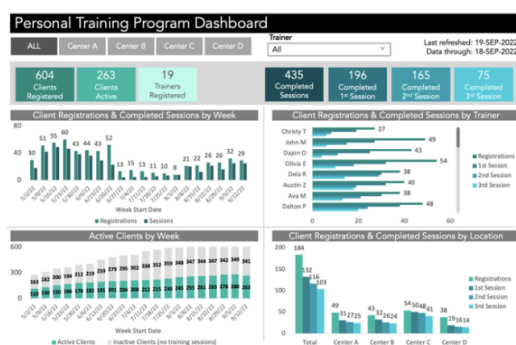
This transformation from a conventional dashboard to a focused story is crucial in my field. As someone who deals with fraud, the ability to present data in a

way that is both convincing and accessible to different stakeholders, be it the risk management team, compliance officers, or executive leadership, is paramount. The selected makeover demonstrates the power of clear visualization and its potential impact on decision-making processes (Archer, 2023).

The clarity and precision with which the 'After' version of the dashboard conveys its message is what I aim to replicate in my presentations. By honing my dashboard presentation skills, I can enhance my ability to tell the story behind the data more effectively, ensuring that the insights I provide can lead to decisive and informed actions against fraudulent activities (Cotgreave, n.d.; ESSELMAN, 2022).

The Breadth of Design Opportunities and Responsibilities (Before and After)

BEFORE



AFTER

Opportunity: **expand our training program**

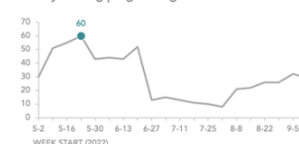
Our summer promotion was effective at getting clients to register for the program, but our latest weekly training program **registrations are 50% lower** compared to the highest week in May.

The volume of training sessions attended has also tapered off since May. **Center C has the highest percentage of registrations** participating in personal training sessions.

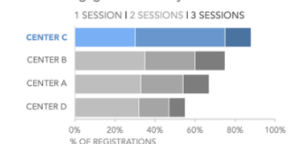
RECOMMENDATION: Review current awareness and promotion strategies to drive additional registrations.

LET'S DISCUSS: What can we learn from **Center C's** success with program engagement?

Weekly training program registrations



Session engagement level by center



The makeover journey from the 'Before' to 'After' dashboard provides a vivid reflection of the possibilities and obligations that come with data visualization. It has personally taught me significant lessons on how to approach data storytelling with a purpose (ESSELMAN, 2022).

- **Design Opportunities Realized:** Upon examining the 'Before' image, a traditional dashboard crowded with data greeted me. It reflected my early days as a fraud and data analyst, where the emphasis was on capturing as much data as possible. Transitioning to the 'After' image, the narrative

changes. It demonstrates a carefully curated story, focusing on pertinent data showing a significant dip in registrations and spotlighting the success of Center C (Cotgreave, n.d.; ESSELMAN, 2022).

The opportunity lies in making complex data digestible. The 'After' image uses a line graph to depict the trend in registrations, enabling immediate recognition of the peak and trough previously lost in the noise. It is a shift from quantity to quality of data presentation, something I have come to value deeply in my professional evolution (Cotgreave, n.d.; ESSELMAN, 2022; Yi, n.d.).

- **Ethical Responsibilities in Data Presentation:** The makeover also highlighted ethical responsibilities. The 'Before' dashboard showed a high risk of misinterpretation due to information overload. In contrast, the 'After' dashboard shows ethical data presentation, focusing on transparency and clarity. The selective use of data ensures that the story is heard and understood in its correct context, a practice I uphold as critical in my line of work (Cipan, 2023; ESSELMAN, 2022).

Moreover, the ethical use of color and text to guide viewers directly to the most important insights, such as the 50% drop in registrations, is a testament to the commitment to truthfulness in data visualization a commitment I share and strive to reflect in all my work (Cipan, 2023; ESSELMAN, 2022; Yi, n.d.).

- **Connecting Effective and Ethical Presentation:** The 'After' visualization marries effectiveness with ethics. It goes beyond aesthetics, ensuring each

design choice serves a purpose and maintains the data's integrity. This principle is something I have learned to prioritize: compelling storytelling should never compromise ethics (Cipan, 2023; ESSELMAN, 2022).

- **Personal Reflections and Commitment:** Reflecting on this example, I am reminded of my power as a data analyst. The 'Before' and 'After' images serve as a benchmark for my ongoing journey to craft visual stories that are engaging and insightful but also honest and ethical. As I continue to develop my skills, particularly with my upcoming course CIS609 - Data Visualization in spring 2024, I am committed to embracing these opportunities and responsibilities, aiming to drive positive change and informed decision-making through my visualizations (Cipan, 2023; ESSELMAN, 2022; Yi, n.d.).

What I Would Like to Learn About Data Visualization

In my work tackling fraud and analyzing data, it has always been crucial for me to turn complex figures into clear, practical insights. The transformation showcased in "From Dashboard to Story" strikes a chord with me; it reflects a familiar challenge: making sure the data I share with others highlights the critical issues at hand. The stories I uncover in fraud analysis are not just numbers. They are narratives of behaviors, trends, and anomalies. These stories can have significant consequences, and it is my responsibility to present them in a way that is immediately understood and acted upon (Kimachia, 2023; ESSELMAN, 2022).

To improve my dashboard presentation skills, I am keen to learn more about narrative techniques and visual design principles. I want to understand better how to guide viewers through a data journey, drawing their attention to critical points without

overwhelming them with too much information or overly complex visuals (ANALYTICS, 2022).

How I Will Further My Knowledge

My journey into the depths of data as a fraud and data analyst has shown me the transformative power of effective visualization. With a practical understanding of data analysis and investigation, my next step is to enhance how I communicate the stories hidden within the numbers. To this end, I have enrolled in "[CIS609 - Data Visualization](#)" for the spring of 2024. This course is not just another class; it represents an in-depth learning opportunity that aligns perfectly with my commitment to sharpening my dashboard presentation and development skills.

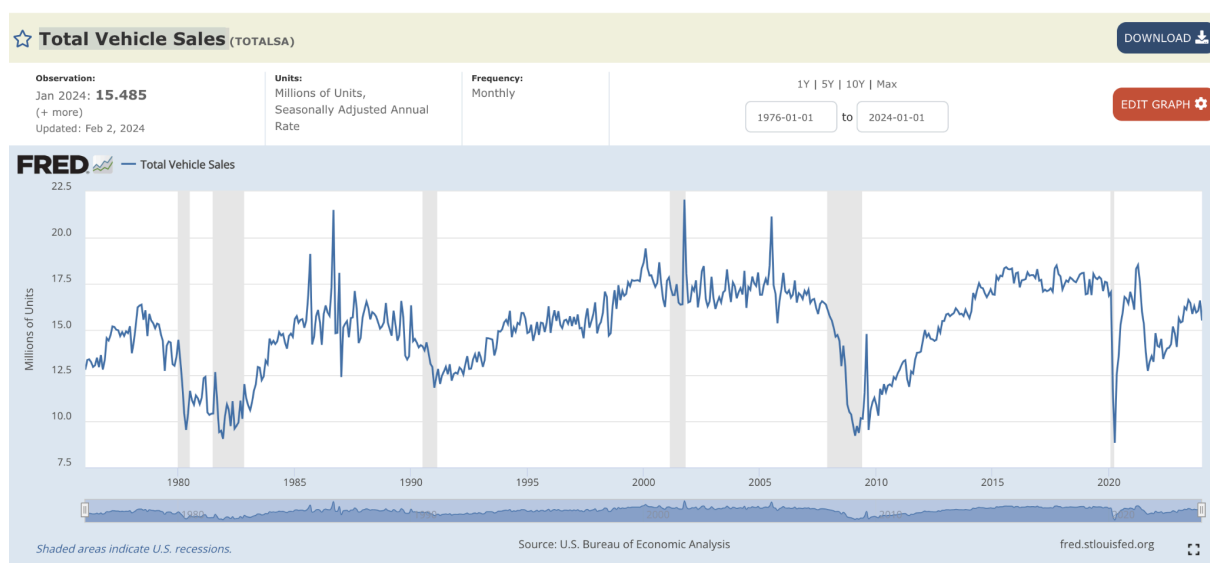
The hands-on experience I have accumulated over the years provides me with a solid foundation for understanding data. However, the dynamic field of data visualization requires a continuous learning mindset. This comprehensive course is designed to build on my existing knowledge and equip me with advanced techniques in crafting visually engaging and informative dashboards. With these enhanced skills, I will be better positioned to present my analyses in engaging and enlightening ways, enabling stakeholders to grasp the significance of the insights swiftly.

By embracing this academic endeavor, I anticipate refining my technical abilities and gaining a broader perspective on data storytelling. This will be crucial for my upcoming career opportunities, where the ability to convey complex information in an accessible format is increasingly valued. With the knowledge gained from this course, I can take my presentations to the next level, transforming raw data into narratives that lead to informed decision-making and drive impactful actions (Mattison, 2023).

Visualizations in Need of Clarity:

Example 1: Total Vehicle Sales

For the first example of a data visualization that could benefit from a makeover, I have selected a chart from the Federal Reserve Economic Data (FRED) displaying "Total Vehicle Sales" (FRED, 2024).

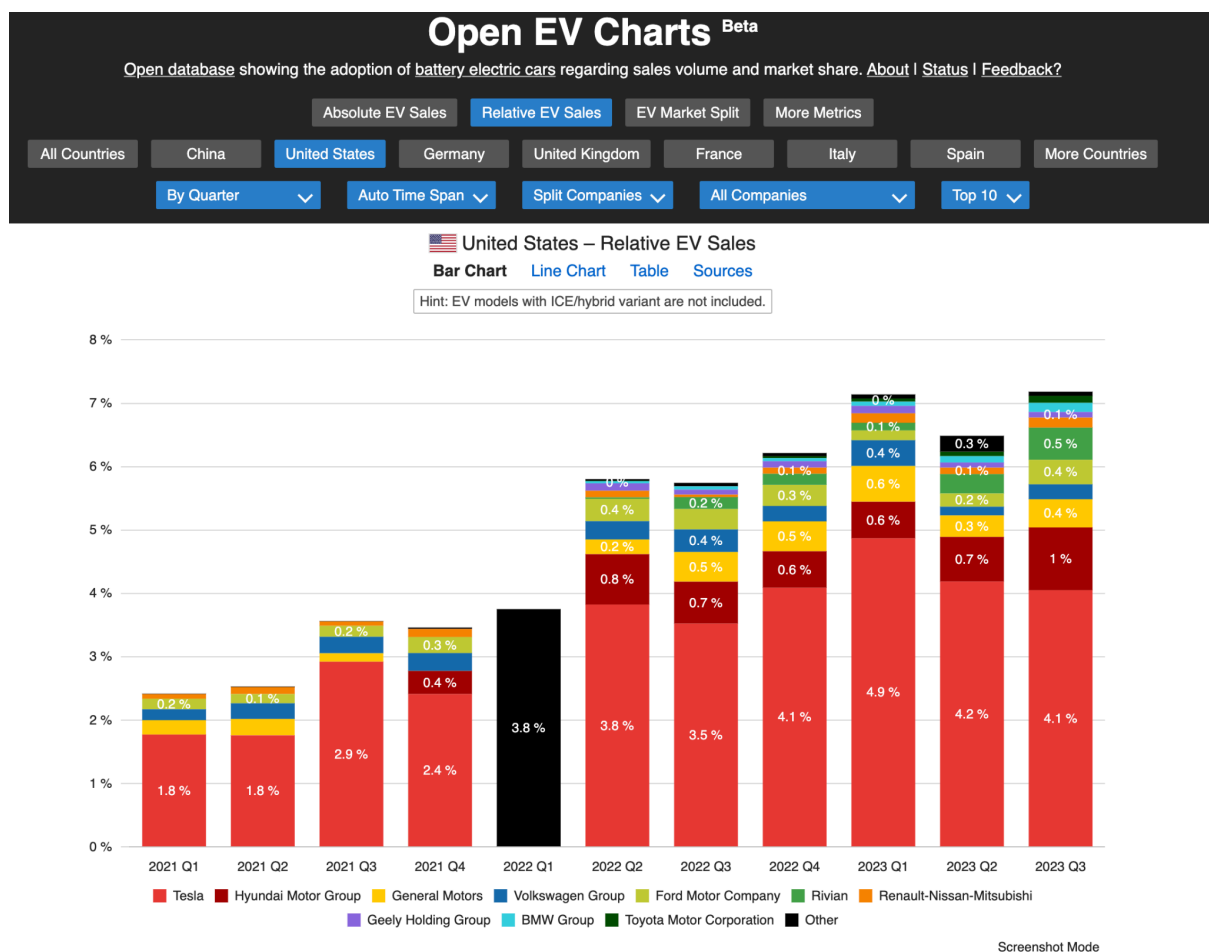


- **Visualization Issues:** The line chart represents vehicle sales over time, with shaded areas indicating U.S. recessions. While the chart provides valuable data, it could be enhanced for better clarity and interpretation. The spikes and drops in the data may benefit from annotations explaining the underlying causes or events. Additionally, using a single color without clear distinctions between different periods or segments makes it hard to identify trends or changes quickly.
- **Improvement Suggestions:** An interactive slider to focus on specific time frames, clearer demarcation of recession periods, and a dual-axis

representation to correlate sales with another relevant economic indicator might make the data more accessible.

- Link: [FRED Total Vehicle Sales Chart](#) (FRED, 2024).

Example 2: United States – Relative EV Sales

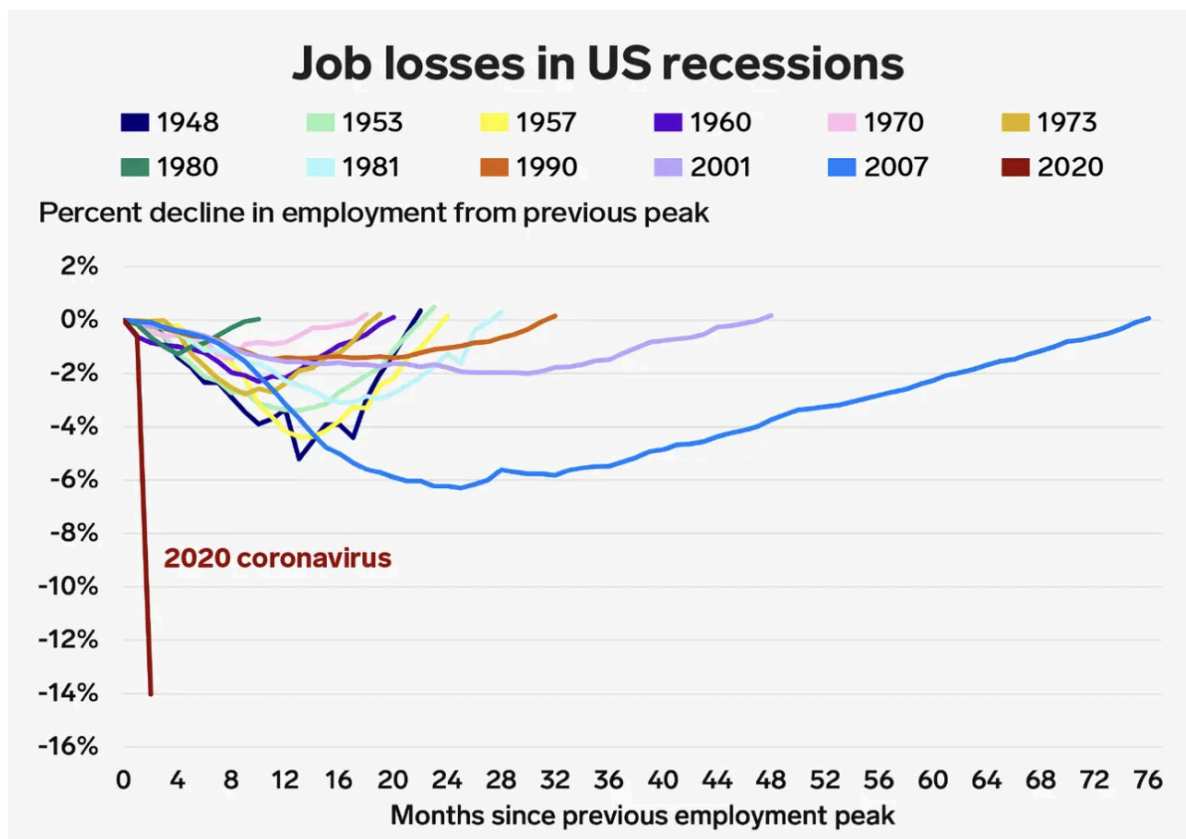


- **Visualization Issues:** This bar chart aims to show the market share of electric vehicle sales by manufacturer over several quarters. However, using similar colors for different manufacturers makes it difficult to distinguish between them at a glance. Furthermore, the percentage figures are quite

small and can be hard to read, which may lead to misinterpretation of the data.

- **Improvement Suggestions:** To improve this visualization, using a broader color palette to differentiate each manufacturer would be beneficial. Larger text for the percentage figures and an interactive legend to filter manufacturers could make the data more readable and user-friendly.
- **Link:** [Open EV Charts - United States – Relative EV Sales](#) (Open EV Charts, n.d.).

Example 3: Job Losses in US Recessions



- **Visualization Issues:** The graph intends to display the percent decline in employment during various US recessions. While informative, the overlapping lines and similar colors can make individual recession trends hard to follow.

The significant impact of the 2020 coronavirus also distorts the scale, making it harder to appreciate the nuances of past recessions.

- **Improvement Suggestions:** Enhancing the color contrast between recessions and possibly employing a logarithmic scale or a secondary axis for the 2020 data could provide better visibility for the historical data. An interactive version where users could highlight individual recessions to study them more closely would also be beneficial.
- **Link:** [Business Insider - Job Losses Chart](#) (Kiersz, 2020).

Conclusion

Embarking on the 'From Dashboard to Story' exploration has reaffirmed my dedication to sculpting narratives from numbers. The insights gained from this journey underscore the essence of my role as a data analyst to illuminate the truth within data through clear, ethical, and compelling storytelling. As I look ahead to further enhancing my visualization skills, I am invigorated by the potential to transform dashboards and the decisions they inform, ensuring that each story told is as impactful as it is insightful.

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