The database BioPharmGuy involves heavy research and allows for questions. This research raises a few questions: Where can this be used? What companies would benefit from this program? How fast/efficient can this program (Tableau) render location/company? How accurate will narrowing the search for the company's location be? The data in the BioPharmGuy database includes specifics: Business Types, Regions, and Start-up Years of Pharmaceutical companies. Firstly, extract the specific data, organize it in Excel, and then create a table/chart of the extracted and organized data and upload it to Tableau. Tableau is a visualization software, and I will improve on specific areas of the program/database that may be needed. I will create geographical regions and build software for locating pharmaceutical types/companies quickly and efficiently. Creating a search box will allow for quick searching for the desired location, company, and business type being looked at. Quick decision-making will be possible for the user/company regarding what is getting bought, visited, and what companies are in a certain area/region.

Article 1

- Seaborn: Statistical Data Visualization
- Michael L. Waskom. 2021.(2021). Retrieved September 20, 2023 from https://joss.theoj.org/papers/10.21105/joss.03021.pdf
- Themes and palettes help improve the overall aesthetics of your visualizations
- Seaborn excels in visualization for categorical data, matrix plots, and even statistical plots.
- Shows the coding for specific tasks

This article discusses Seaborn, a Python data visualization library based on Matplotlib. This is specifically designed for creating informative and attractive statistical graphics. It provides a high-level interface for drawing visually pleasing and informative statistical graphics. Seaborn has several built-in themes and color palettes that make it easy to create professional-looking plots. Seaborn is a powerful tool for creating informative and aesthetically pleasing visualizations for data exploration and presentation. It is widely used in data analysis, machine learning, and scientific research.

Article 2

- Why is Data Visualization Important? What is Important in Data Visualization?
- Antony Unwin. 2020. Why is data visualization important? what is important in data visualization? (January 2020). Retrieved September 20, 2023 from https://hdsr.mitpress.mit.edu/pub/zok97i7p/release/4

- Explains in depth the purpose behind data visualization
  - What and why
- Does deeper by giving other examples of visualizations
- Shows the research of data visualization

This article is a great example of explaining why and what is important to data visualization. Data visualization is crucial for several reasons. It simplifies complex data, making it easier to grasp, and aids effective communication to a diverse audience, enhancing understanding and knowledge sharing. It also plays a pivotal role in data-driven decision-making by providing clear insights, identifying trends and anomalies, and facilitating exploratory data analysis. Visualizations enable real-time monitoring and efficient sharing of findings and are instrumental in conveying a coherent narrative. To create effective data visualizations, it's essential to prioritize clarity, accuracy, relevance, consistency, and audience awareness while considering ethical and accessibility aspects and remaining open to feedback and iterative improvements.

Article 3

- Big Data Analytics Capabilities: A Systematic Literature Review and Research Agenda
- Patrick Mikalef, Ilias O. Pappas, John Krogstie, and Michail Giannakos. 2017. Big Data Analytics Capabilities: A systematic literature review and research agenda - information systems and e-business management. (July 2017). Retrieved September 20, 2023 from https://link.springer.com/article/10.1007/s10257-017-0362-y
- Discusses the importance of analytics (The purposes, uses, and why it is necessary in a company)
- Shows the development of big data analytics

This article touches on many points, especially the importance of big data analytics. This could help towards my capstone. Taking points from the reading can be put to use. As big data becomes increasingly vital, competitive strategies are being implemented everywhere. This can be taken into a company and benefit them for future use.

Article 4

- Integration of Google Maps/Earth with Microscale Meteorology Models and Data Visualization
- Yansen Wang, Giap Huynh, and Chatt Williamson. 2013. Integration of Google Maps/Earth with microscale meteorology models and data visualization. In Proceedings of the ACM International Conference on [Conference Name], July 27, 2013, ScienceDirect. https://www.sciencedirect.com/science/article/pii/S0098300413002124

Exploring the merging of Google Maps and Google Earth with microscale meteorology models for enhanced data visualization. This integration facilitates the spatial representation of meteorological data, offering real-time insights and user-friendly accessibility. It has potential applications in meteorological research, real-time monitoring, education, and decision-making across various fields. Also, diving into technical details, advantages, and practical use cases for this integration.

Article 5

- Challenges and Opportunites with Big Data Visualizations
- Rajeev Agrawal, Anirudh Kadadi, Xiangfeng Dai, and Frederic Andres. 2015. Challenges and Opportunities with Big Data Visualizations. In Proceedings of the ACM Digital Library, October 25, 2015. https://dl.acm.org/doi/abs/10.1145/2857218.2857256

Explores the intricacies and potential benefits of visualizing large volumes of data, commonly called big data. Challenges that arise when dealing with massive datasets, such as data processing, scalability, and interpretability, while also highlighting the opportunities for gaining valuable insights through effective data visualization techniques. The focus is on understanding how visual representations can help tackle the complexities of big data, aid decision-making, and uncover meaningful patterns and trends within these vast datasets.

Article 6

- Data Changes Everything: Challenges and Opportunities in Data Visualization Design Handoff
- Jagoda Walny, et al. 2019. Data Changes Everything: Challenges and Opportunities in Data Visualization Design Handoff. In Proceedings of the ACM Conference on [Conference Name], August 27, 2019. ACM. https://ieeexplore.ieee.org/abstract/document/8816695

Diving into intricacies and benefits of the handoff process in data visualization design. Challenges faced when transitioning from the design phase to the implementation or communication phase in data visualization projects. Opportunities for improving this transition to ensure that the intended insights and visualizations are effectively conveyed and implemented. The focus is on understanding the crucial role of design handoff in the data visualization and how it can impact decision-making and understanding in various domains.