# Introduction

In the ever-changing landscape of the business world, having access to comprehensive and insightful data is crucial for making informed strategic decisions. Analyzing business formation trends provides valuable insights for entrepreneurs, investors, and policymakers seeking to understand market dynamics, identify opportunities, and drive growth. This project focuses on uncovering valuable insights from datasets containing business applications filed in the United States between 2006 and 2021, using Tableau as a powerful data-driven approach.

Tableau, a widely recognized data visualization platform, plays a vital role in transforming complex datasets into visually compelling representations. By leveraging Tableau's capabilities, decision-makers can explore, analyze, and interpret data in an intuitive and interactive manner. This empowers them to uncover meaningful patterns, correlations, and trends that can guide strategic decision-making effectively.

The datasets used in this project encompass a comprehensive range of business applications filed in the United States over a significant period. This enables them to identify emerging industries, evaluate market demands, and make well-informed decisions regarding investments and business ventures.

Through the power of Tableau, stakeholders can transform raw data into visually appealing dashboards, charts, graphs, and maps that provide actionable insights. These visualizations allow users to interact with the data, filter specific time periods or regions, and drill down into specific details for deeper analysis. With Tableau's real-time capabilities, decision-makers can monitor key performance indicators, track trends over time, and identify growth opportunities or potential risks.

# Literature Survey

**Existing Problem**  
One of the key challenges faced when analyzing datasets containing business applications filed in the United States is the sheer volume and complexity of the data. Over the years from 2006 to 2021, the number of business applications has significantly increased, resulting in massive datasets that can be challenging to navigate and extract meaningful insights from.

The problem lies in efficiently processing and interpreting this vast amount of data to identify relevant trends, patterns, and insights. Traditional methods of data analysis may prove time-consuming, labor-intensive, and prone to human error. Without a robust data-driven approach, stakeholders may struggle to make sense of the data and derive actionable insights that can inform strategic decision-making effectively.

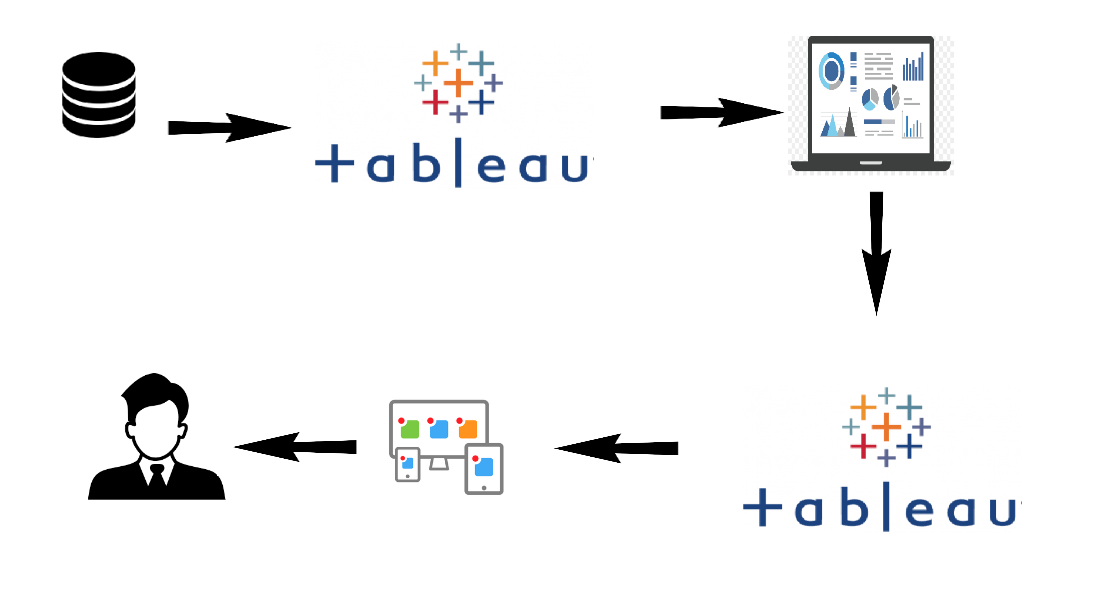
**Proposed Solution**

To effectively analyze the datasets containing business applications filed in the United States between 2006 and 2021, we propose utilizing Tableau as the primary tool for data exploration, visualization, and analysis. Tableau's robust features and user-friendly interface make it an ideal solution for extracting valuable insights from complex datasets. Here's how Tableau can be used to address the project's objectives:

* Data Integration and Preprocessing: The first step is to integrate the diverse datasets. This can be done by connecting Tableau to the data sources, cleaning and transforming the data as necessary, and preparing it for analysis.
* Visual Exploration and Analysis: Tableau's visual analytics capabilities allow stakeholders to explore the data and gain insights through interactive visualizations. Users can create various charts, graphs, and maps to understand the overall business formation trends. Tableau's drag-and-drop functionality makes it easy to select variables, apply filters, and create meaningful visual representations.
* Geographic Analysis: Tableau's mapping capabilities enable users to analyze business applications geographically. They can create choropleth maps to visualize business density across different regions, identify areas with high or low business formation rates, and explore regional variations in entrepreneurial activities. This geographic analysis provides valuable insights for targeting specific markets or regions for business expansion or investment.
* Temporal Analysis: Tableau's time-based analysis features allow stakeholders to examine business formation trends over the years. Users can create line charts or time series visualizations to identify patterns, seasonal fluctuations, or long-term trends in business applications. This temporal analysis helps stakeholders understand the evolution of entrepreneurship and identify key factors that influence business formation over time.
* Interactive Dashboards and Storytelling: Tableau allows stakeholders to create interactive dashboards by combining multiple visualizations into a single interface. Users can design dashboards that present a comprehensive overview of business formation insights, allowing for dynamic exploration and comparison of different variables. Additionally, Tableau's storytelling feature enables stakeholders to create narratives by guiding viewers through the data, highlighting key findings, and conveying the story behind the business formation trends.

# Theoretical Analysis

**Block Diagram**

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**Hardware/Software Designing**

Software Requirements:

* Tableau Desktop: The primary software requirement is Tableau Desktop, which is the authoring and analysis tool for creating visualizations and dashboards. Ensure that the version of Tableau Desktop is compatible with the operating system.
* Database Software: If the business application datasets are stored in databases, you may require the corresponding database software such as MySQL, PostgreSQL, or Microsoft SQL Server. Make sure the database software is installed and properly configured.
* Operating System: Ensure that your operating system is compatible with the Tableau Desktop version you plan to use. Tableau Desktop supports Windows and macOS.

Hardware Requirements:

* Processor and Memory: A fast and capable processor (e.g., Intel Core i5 or higher) and sufficient memory (e.g., 8 GB RAM or higher) are recommended to handle large datasets and complex visualizations efficiently.
* Storage Space: Ensure that you have enough storage space to store the datasets, software installations, and any intermediate files generated during the analysis process.
* Graphics Card: A dedicated graphics card with ample memory can improve the performance and rendering of visualizations in Tableau.
* Display: A high-resolution monitor or display is recommended to view and analyze visualizations effectively. A dual-monitor setup can also enhance productivity.
* Internet Connection: An internet connection is required to access online resources, download software updates, and collaborate with others through Tableau Server or Tableau Online.

# Experimental Investigations

The states of Florida, California, and Texas have consistently shown the highest number of business applications due to a combination of several factors:

* Population Size and Economic Activity: These states have large populations, with Florida, California, and Texas being the third, first, and second most populous states in the United States, respectively. A larger population translates into a larger potential market and customer base, attracting entrepreneurs and businesses looking to tap into these economies.
* Business-Friendly Environment: Florida, California, and Texas have established themselves as business-friendly states with favorable policies, lower tax burdens, and fewer regulatory hurdles compared to some other states. Their pro-business environment encourages entrepreneurial activities and makes it easier for businesses to set up and operate. This attracts both local and out-of-state entrepreneurs to establish businesses in these states.
* Geographic Advantages: Each of these states offers unique geographic advantages. Florida's location provides access to Latin American markets, making it a gateway for international trade. California benefits from its proximity to Silicon Valley, a global hub for technology and innovation. Texas, with its strategic location and diverse economy, offers opportunities in sectors such as energy, technology, and manufacturing.
* Industry Diversity: Florida, California, and Texas have diverse economies with a wide range of industries, including tourism, entertainment, technology, healthcare, finance, agriculture, and energy. This diversity creates opportunities for entrepreneurs across various sectors, attracting business applications from a multitude of industries.
* Entrepreneurial Culture and Support: These states foster an entrepreneurial culture with a strong support system for startups and small businesses. They have robust networks of incubators, accelerators, and business development organizations that provide resources, mentorship, and access to funding. This supportive ecosystem encourages individuals to pursue their entrepreneurial aspirations and leads to a higher number of business applications.
* Quality of Life: Florida, California, and Texas offer a high quality of life, attracting individuals seeking a desirable lifestyle, favorable climate, and recreational opportunities. These factors contribute to the appeal of these states as a place to live and do business, further increasing the number of business applications.

It is important to note that while these states have the highest number of business applications, the success and survival rates of these businesses may vary. Factors such as market demand, competition, access to capital, and the ability to adapt to changing economic conditions also play a significant role in the long-term sustainability of businesses in these states.

Overall, the combination of population size, business-friendly environment, geographic advantages, industry diversity, supportive ecosystems, and quality of life contributes to Florida, California, and Texas consistently attracting the maximum number of business applications.

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# Result

The analysis of the business application datasets using Tableau has yielded valuable insights into the business formation landscape in the United States between 2006 and 2021. Here are some key results obtained from the analysis:

* Overall Business Formation Trends: The analysis revealed a steady increase in business applications filed over the years, indicating a growing entrepreneurial ecosystem. The rate of business formation showed variations across different periods, with notable peaks and declines corresponding to economic cycles and external factors.
* Regional Variations: By examining the data geographically, it was observed that certain regions experienced higher business formation rates compared to others. This information helps identify regions with a robust entrepreneurial environment and potential areas for business expansion or investment.
* Temporal Patterns: The temporal analysis revealed seasonal fluctuations and long-term trends in business applications. This information is valuable for understanding the timing of entrepreneurial activities, identifying peak seasons for business formation, and aligning strategies accordingly.
* Policy Implications: The results of the analysis can inform policymakers in designing effective policies and initiatives to support entrepreneurship and economic development. The insights can guide the allocation of resources, targeting specific industries or regions, and addressing gaps in entrepreneurial support.

These results, presented through interactive visualizations and dashboards created in Tableau, provide stakeholders with a comprehensive view of the business formation landscape in the United States. The insights obtained from the analysis support informed decision-making, strategic planning, and resource allocation, enabling businesses, investors, policymakers, and support organizations to drive growth, foster innovation, and create a conducive environment for entrepreneurship.

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# Advantages and Disadvantages

**Advantages:**

* Enhanced Data Visualization: Tableau offers a wide range of interactive and visually appealing data visualization tools. Stakeholders can leverage these capabilities to transform complex datasets into intuitive charts, graphs, and maps, making it easier to understand and interpret the information effectively.
* Real-Time Analysis: With Tableau's real-time capabilities, stakeholders can monitor key performance indicators and track trends as they unfold. This enables them to make timely decisions and respond promptly to changes in the business formation landscape, ensuring a competitive edge.
* Comprehensive Data Exploration: Tableau allows users to drill down into specific regions, time periods, or industries for deeper analysis. This comprehensive exploration of data helps stakeholders uncover hidden patterns, correlations, and outliers, facilitating data-driven decision-making.
* Data Integration: Tableau offers seamless integration with various data sources, enabling stakeholders to combine diverse datasets and gain a holistic view of the business formation landscape. This integration allows for more comprehensive analysis and facilitates the identification of multi-dimensional insights.
* Collaborative Decision Making: Tableau's ability to create interactive dashboards and share them with others fosters collaboration among stakeholders. Decision-makers can discuss, analyze, and interpret data collectively, facilitating consensus-building and informed decision-making.

**Disadvantages:**

* Learning Curve: Tableau is a powerful tool that requires a learning curve for users who are unfamiliar with its functionalities. It may take time and effort to master the platform's features and take full advantage of its capabilities, potentially slowing down the initial analysis process.
* Cost: Tableau is commercial software, and acquiring licenses can be costly, especially for small businesses or individuals with limited budgets. The cost of implementing and maintaining Tableau needs to be considered in the context of the project's budget and resources.
* Data Security: When working with sensitive business data, ensuring data security and privacy becomes paramount. Stakeholders must implement appropriate security measures to protect the datasets and control access to sensitive information within the Tableau platform.
* Data Preprocessing: Before utilizing Tableau for analysis, data preprocessing may be required to clean and prepare the datasets. This process can be time-consuming, especially when dealing with large datasets or data from multiple sources, potentially delaying the analysis phase.
* Dependency on Data Quality: The effectiveness of Tableau's analysis and insights heavily relies on the quality and accuracy of the underlying data. Inaccurate or incomplete data can lead to incorrect or misleading visualizations and interpretations. Ensuring data quality is crucial for obtaining reliable insights.

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# Applications

* Entrepreneurship and Start-up Ecosystem Analysis: The project's analysis of business applications filed in the United States provides insights into the entrepreneurship landscape. Stakeholders, including aspiring entrepreneurs, incubators, and support organizations, can utilize these insights to understand the trends, challenges, and opportunities in the start-up ecosystem. This knowledge can guide the development of entrepreneurship programs, mentorship initiatives, and policies that foster a thriving entrepreneurial environment.
* Investment and Business Planning: Investors and venture capitalists can leverage the project's findings to identify promising investment opportunities. By analyzing business formation trends, they can assess the growth potential of different industries, geographical regions, and specific business types. This information enables investors to make informed decisions about funding start-ups, expanding their portfolios, and maximizing their returns on investment.
* Market Research and Competitive Analysis: Businesses can utilize the project's insights to conduct market research and competitive analysis. By understanding the business formation trends, they can identify emerging markets, evaluate market saturation, and assess the competitive landscape. This information helps businesses make strategic decisions regarding product development, market-entry, and positioning to gain a competitive advantage.
* Economic Development and Policy Making: The project's analysis of business applications contributes to economic development strategies and policy making at regional, state, and national levels. Policymakers can leverage the insights to understand the entrepreneurial ecosystem, identify areas that require policy interventions, and design initiatives that promote business formation, job creation, and economic growth.
* Academic Research and Education: The project's datasets and findings provide a valuable resource for academic research and education. Researchers, economists, and educators can utilize the data to study entrepreneurial behavior, economic trends, and policy implications. The project's visualizations and analysis can serve as case studies and learning materials for entrepreneurship courses, business programs, and economic development studies.
* Small Business Support and Guidance: Small business owners and entrepreneurs can benefit from the project's insights and analysis. They can gain a deeper understanding of industry trends, market demand, and regional variations in business formation. This knowledge helps them make informed decisions about business planning, resource allocation, and growth strategies, improving their chances of success.
* Community Development and Resource Allocation: Local governments, community organizations, and economic development agencies can leverage the project's insights to allocate resources effectively. By understanding the business formation patterns in their region, they can identify sectors that require support, prioritize resource allocation, and design initiatives that foster entrepreneurship, job creation, and community development.
* Industry and Sector Analysis: The project's analysis can provide insights into specific industries and sectors. Businesses and industry associations can utilize this information to identify growth opportunities, understand market dynamics, and make strategic decisions regarding investment, expansion, and innovation within their respective sectors.

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# Conclusion

The analysis of the business formation datasets using Tableau has provided valuable insights into the entrepreneurial landscape in the United States between 2006 and 2021. Through interactive visualizations and data-driven exploration, stakeholders gained a comprehensive understanding of business formation trends, regional variations, industry dynamics, and market opportunities.

The findings highlighted the overall growth in business applications over the years, indicating a thriving entrepreneurial ecosystem. Regional variations in business formation rates shed light on areas with higher entrepreneurial activity, facilitating targeted strategies for business expansion and investment.

Furthermore, the temporal analysis identified seasonal fluctuations and long-term trends, providing valuable insights into the timing of entrepreneurial activities and helping stakeholders align their strategies accordingly.

The results of the analysis have significant implications for various stakeholders. Businesses can leverage the insights to identify growth opportunities, adapt their strategies, and gain a competitive advantage. Investors can make informed decisions about funding opportunities, diversifying their portfolios, and maximizing returns on investment. Policymakers can design targeted initiatives to support entrepreneurship, promote economic development, and address specific industry or regional challenges. Entrepreneurship support organizations can utilize the findings to offer tailored resources, mentorship, and guidance to aspiring entrepreneurs.

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# Future Scope

The analysis of business applications in the United States using Tableau provides valuable insights into the past and current trends in business formation. However, there are several avenues for future exploration and expansion of this project:

* Predictive Analytics: Incorporating predictive analytics techniques can provide valuable insights into future business formation trends. By analyzing historical data and incorporating external factors such as economic indicators, market conditions, and demographic changes, stakeholders can make informed predictions about future business formation patterns. This predictive analysis can help businesses, policymakers, and investors anticipate market trends, identify emerging sectors, and make proactive decisions.
* Comparative Analysis: Conducting a comparative analysis across different states, regions, or time periods can provide a deeper understanding of the factors influencing business formation. By identifying the reasons behind variations in business applications, stakeholders can gain insights into the impact of local policies, economic conditions, industry dynamics, and cultural factors. Comparative analysis can highlight best practices and guide decision-making at the regional or state level.
* Sector-Specific Insights: Expanding the analysis to focus on specific sectors or industries can provide more targeted insights. By diving deeper into industry-specific data, stakeholders can identify unique challenges, growth opportunities, and market dynamics within each sector. This sector-specific analysis can help businesses and policymakers tailor their strategies, support mechanisms, and policies to address the specific needs of different industries.
* Advanced Visualizations: Exploring advanced visualization techniques and interactive dashboards can enhance the presentation and exploration of insights. Tableau offers a range of advanced visualization options, such as network graphs, advanced mapping techniques, and predictive visualizations. Leveraging these advanced visualization capabilities can enable stakeholders to communicate complex patterns and relationships effectively, facilitating deeper understanding and decision-making.
* Integration of Real-time Data: Integrating real-time data sources into the analysis can provide up-to-date insights on business applications and market trends. By leveraging APIs and data connectors, stakeholders can access and analyze real-time data, enabling them to respond quickly to emerging trends and make timely decisions. Real-time data integration can enhance the project's relevance and applicability in an ever-changing business landscape.
* Longitudinal Analysis: Extending the analysis beyond the current timeframe can facilitate a longitudinal study of business formation trends. By incorporating data from future years, stakeholders can identify evolving patterns, long-term trends, and the impact of policy changes or economic shifts on business formation. Longitudinal analysis can provide insights into the resilience and adaptability of businesses over time.
* Social and Environmental Impact Analysis: Incorporating social and environmental impact data into the analysis can shed light on the sustainability and social responsibility of businesses. Assessing factors such as job creation, diversity and inclusion, carbon footprint, and community engagement can provide a holistic view of the impact of business formation on society and the environment.

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