Title: The U.S. History of Baseball Stadiums

Lin to the map: https://m24mendez.github.io/Final/baseball_map4.html

Introduction

The "Baseball Stadiums with Time Slider" web application provides an interactive cartographic exploration of the historical and geographical development of Major League Baseball (MLB) stadiums across the United States. Utilizing the ArcGIS JavaScript API, this tool delivers a rich visual and temporal mapping experience, designed for historians, sports enthusiasts, and researchers. This report outlines the framework, design choices, utility, limitations, and sustainability of the application, with an emphasis on the integration of spatial technologies and historical data.

Application Framework and Methods

Developed using the ArcGIS JavaScript API, the application leverages several key components that enhance its functionality and user experience:

- **GeoJSONLayer**: The main layer of the map uses a geojson file hosted in github with all the data about the stadiums, team names, capacity and more importantly, the coordinates.
- **UniqueValueRenderer**: This component is crucial for applying different colors to the map symbols, representing different leagues with their official branding colors—red for the American League, blue for the National League, and purple, a blend of the two, for locations representing both leagues.

- **MapView**: Centers and zooms the map to encompass the entire United States, ensuring all locations where stadiums were built are visible upon loading. This global view facilitates an understanding of the geographic spread and evolution of baseball leagues.

Widgets:

- **TimeSlider Widget**: Adds dynamic temporal exploration, allowing users to observe the evolution of stadiums over time, reflecting changes such as new stadiums and league changes.
- **Search Widget**: Enhances navigational efficiency by enabling users to search for specific teams.

Decision Rationale and Influences

The choice of simple marker symbols (circles) was driven by the need for clarity and uniformity in representing diverse data points across a broad geographic area. Circles provide a visually non-intrusive yet distinct marker that is effective in diverse scaling scenarios, from national overviews to localized details.

The application's initial view is strategically set to showcase the entire country, facilitating immediate visual comprehension of the spread and density of stadiums, reflecting the historical expansion from the Northeast to the broader national footprint, exemplified by notable moves like those of the Brooklyn Dodgers and New York Giants in 1957.

Utility, Limitations, and Sustainability

Utility: This application stands out as the only interactive, historical map focused specifically on MLB stadiums, offering unique insights into the spatial-temporal progression of baseball in America.

Limitations:

- **Data Complexity**: Each team may have multiple entries due to different stadiums used throughout history, leading to potential clutter and redundancy in search results.
- **Data Accuracy and Completeness**: The stadium data, including capacity and historical use, were manually compiled from multiple sources, predominantly ballparksofbaseball.com. This extensive manual aggregation may carry inconsistencies and omissions.

Sustainability: The application relies heavily on the ArcGIS platform, including its mapping services and widgets. Continued access to these tools is contingent upon subscription renewals and compatibility with ongoing API updates.

Comparative Analysis and Cartographic Considerations

The choice of the ArcGIS platform was influenced by its widespread professional use and robust support for interactive mapping features, including widgets and custom renderers. The cartographic approach, especially the use of official league colors and the strategic base map selection, was designed to enhance user engagement and informational clarity.

Conclusion

The "Baseball Stadiums with Time Slider" application harnesses GIS technology to create a compelling interactive map that not only narrates the history of MLB stadiums but also visually demonstrates the growth of baseball across the United States. By integrating temporal data visualization, the application offers a unique educational tool that highlights key historical trends in the sport's development. Despite its reliance on proprietary software and the inherent challenges of data compilation, the map stands as a pioneering tool in sports history visualization, offering a foundational platform for future enhancements and studies.