Socioeconomic and Demographic Factors Influence on Participation in the Arts

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Abstract

Participation in the arts is a meaningful part of culture, education, and human well-being, but access is not equally distributed. While the arts take many forms and offer opportunities for creativity and connection, financial, geographic, and institutional barriers often limit who can engage. Art supplies and classes can be expensive, and in many low-income communities, school arts programs are the first to be cut. Location can affect access to museums, theaters, and community programs, while shifts in technology are changing how people interact with the arts. This analysis investigates how socioeconomic factors and demographic factors influence arts participation in the United States. We define "fine arts" as traditional art disciplines such as visual arts (painting, drawing, sculpture), music, theater, and dance. Fine arts are often distinguished from applied or commercial arts by their focus on artistic expression and emotional impact. Drawing on national survey data, including variables like income, education, race, ethnicity, age, and location, this paper explores patterns in engagement with arts performances and museums, both in-person and online. We asked the following questions:

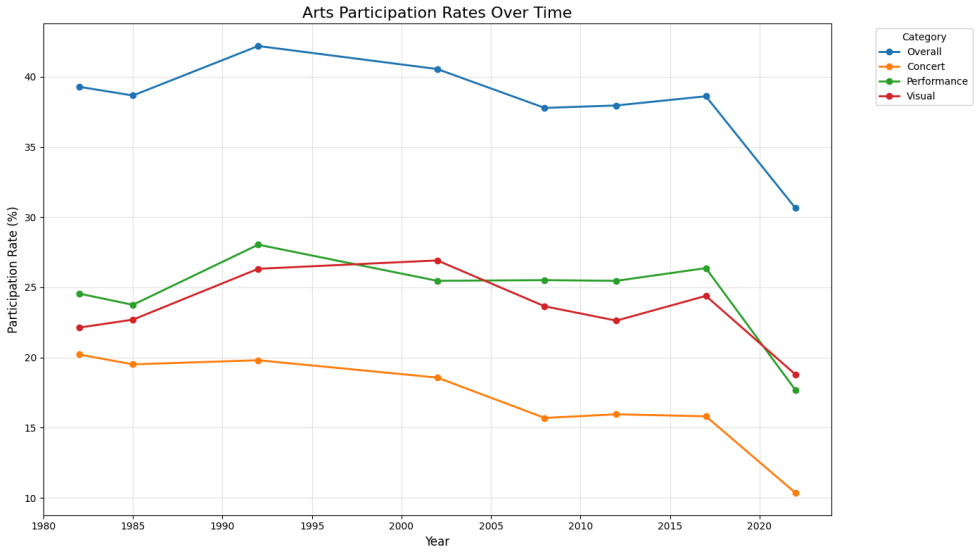
- *Are there specific trends in the particular types of fine arts that receive more or less engagement?*
- *Are certain populations (in the U.S.) more likely to engage in the fine arts than others? If so, what factors cause this?*
- *Are there socioeconomic barriers to access to fine arts opportunities or activities? If so, what are they?*
- *How has fine arts participation changed over time with the rise of digital media?*

Results suggest that higher income and education levels are associated with increased participation across all forms of the arts, while racial and age disparities suggest persistent barriers to access and representation. Regional differences and urban-rural divides also emerge, highlighting structural inequalities in arts infrastructure and opportunities. Additionally, different types of art are more popular than others across various groups.

Results

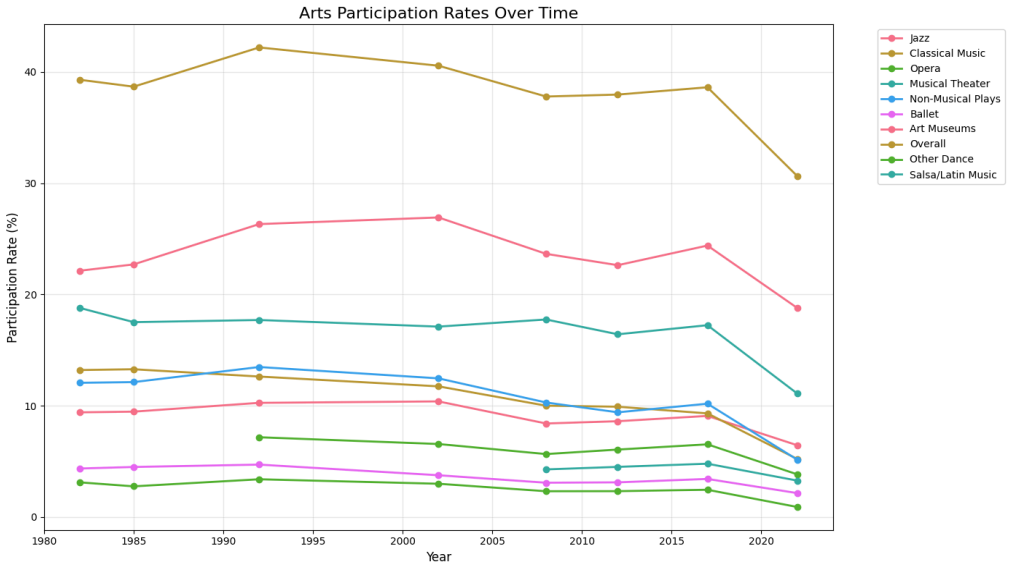
Note: Find all of our plots and interact with them using this link: ac-idp-fp.netlify.app/all_plots.html

1. Comparing Types of Arts Engagement



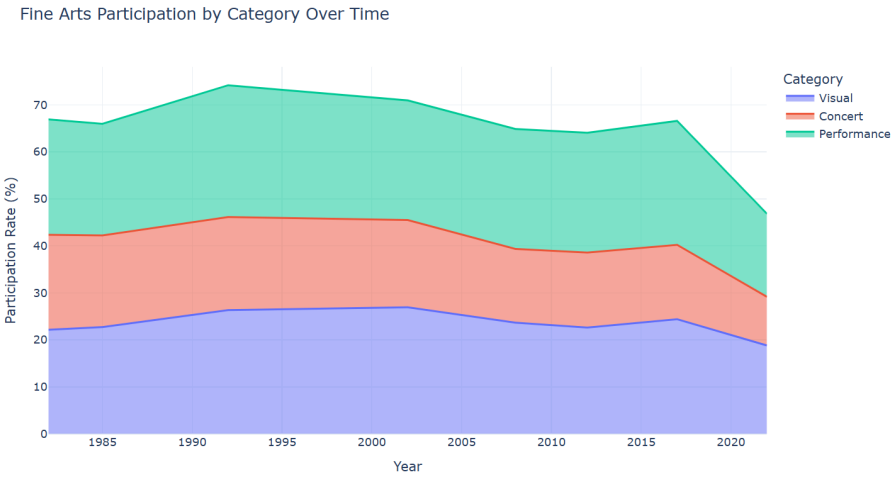
Plot 1: Arts Participation Rates Over Time (Categorical Breakdown)

This shows how the different categories of art activities, grouped by "human sense" interactions, have changed in participation rates over time. Human senses have been grouped into "visual" for activities like "visiting art museums", "concert" for activities like "attended classical concert", and "performance" for activities like "attended theatre performance". All categories show a steeper decline from 2017 to 2022.



Plot 2: Arts Participation Rates Over Time (Activity Breakdown)

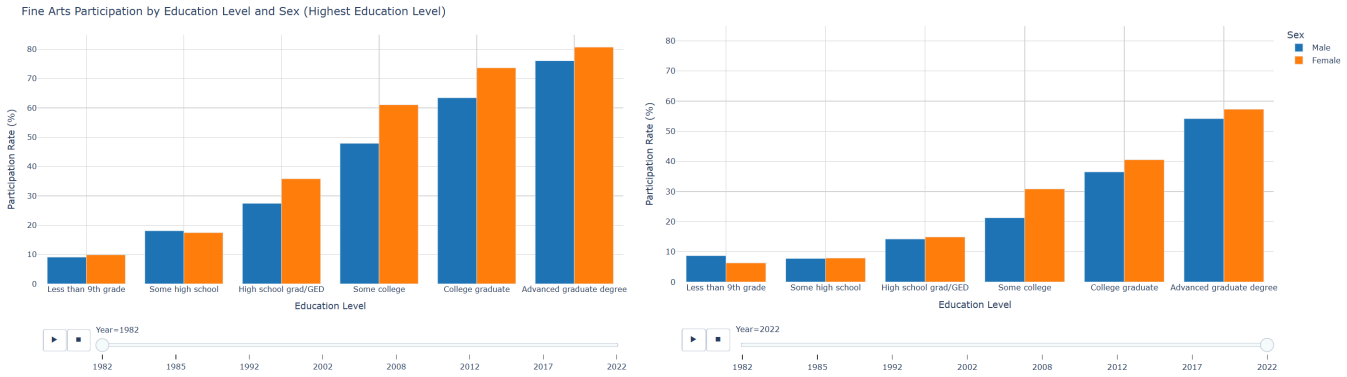
This shows a more detailed breakdown of the broader categories mentioned in Plot 1, expanding on specific activities. All activities show gradual stability in earlier years, with declines from 2017 to 2022.



Plot 3: Arts Participation by Category Over Time (Area Chart)

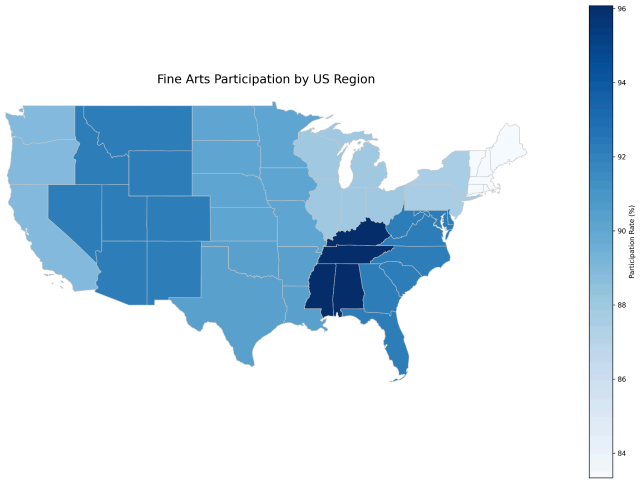
This shows how the different categories of art activities, grouped by “human sense” interactions, have changed in participation rates over time. All categories show steady percentages over the years, except that they decline from 2017 to 2022. Performance Arts has the highest participation, whereas Concert Arts has the lowest.

2. Engagement by Group (Socioeconomic and Demographics)



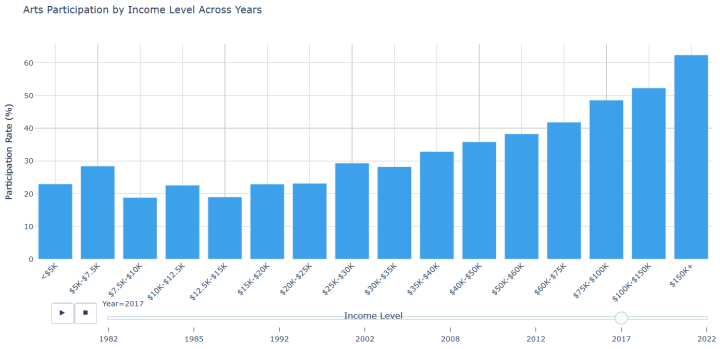
Plot 4: Arts Participation by Highest Education Level Education Level and Sex

This shows how education levels correlate to percent of participation based on birth gender. In 1982, participation is higher, whereas in 2022 participation has reduced for both males and females for all education levels.



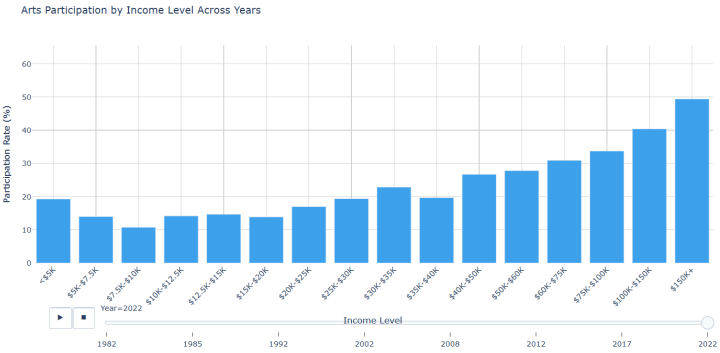
Plot 5: Arts Participation by US Region

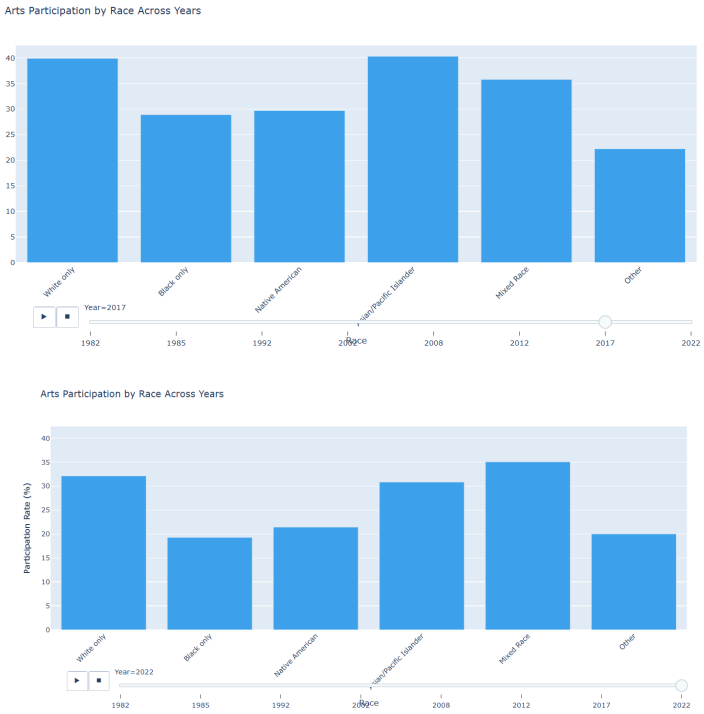
This shows how arts participation varies between regions in the United States. Overall East South Central has the highest participation.



Plot 6: Arts Participation by Income Over Time

This plot shows the level of arts participation by income, and how that's changed over time. Overall, people with higher incomes have higher rates of participation.

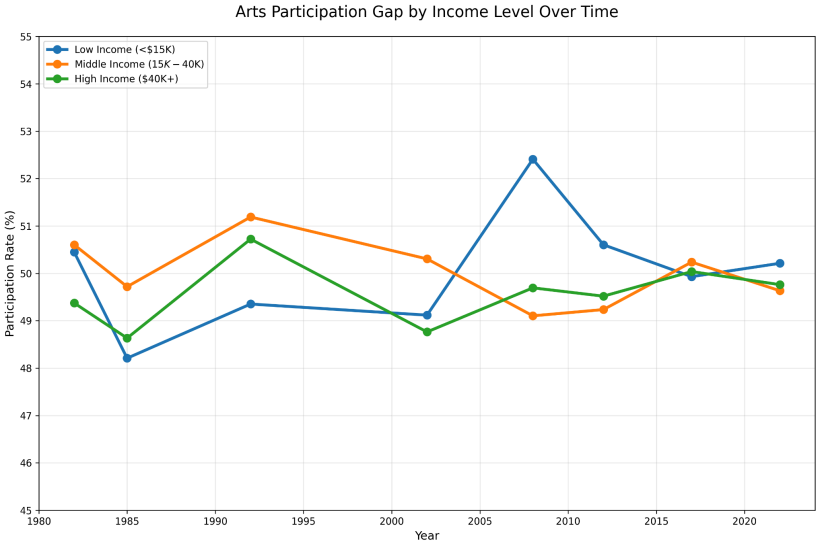




Plot 7: Arts Participation by Race Over Time

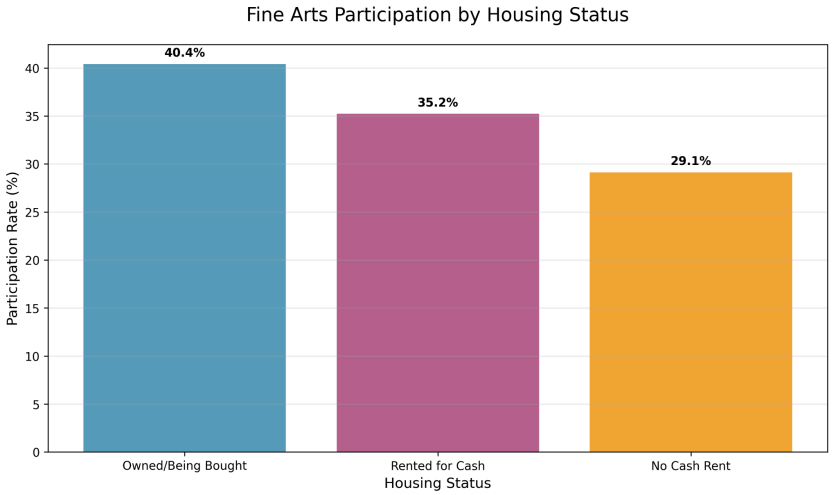
This plot shows the level of arts participation by race, and how that's changed over time. Generally, white people, Asian people, and people with mixed heritage have higher rates of participation than those who are Black or Native American.

3. Barriers to Access



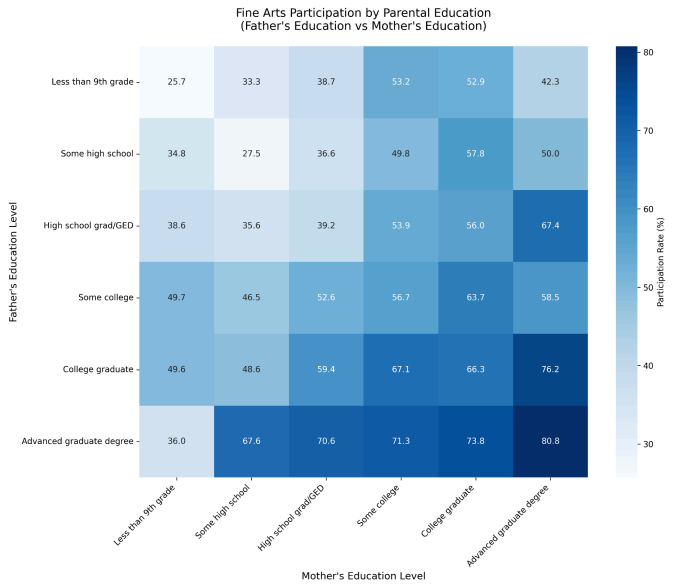
Plot 8: Arts Participation Gap by Income Level Over Time

This examines how the participation rate based on income level has changed over time. This graph focuses on the distance between the lines, showing that there isn't a significant gap between participation and income.



Plot 9: Arts Participation Gap by Housing Status

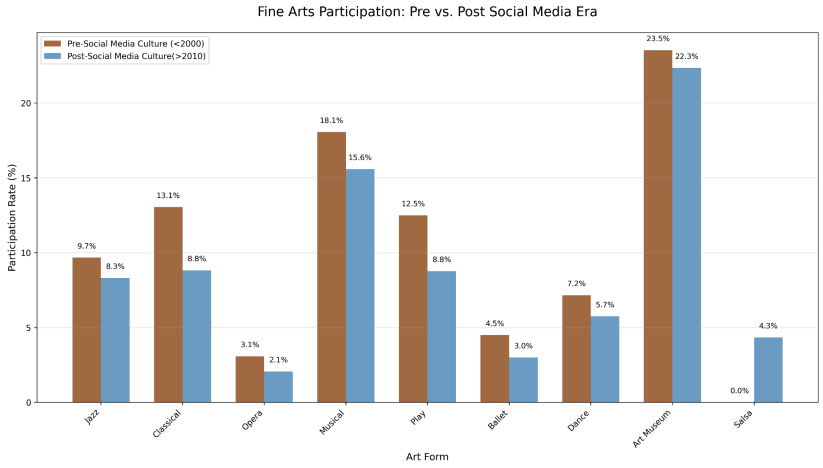
This examines how housing or expense of living impacts arts participation. Overall, those who can afford more expensive housing tend to have greater participation.



Plot 10: Arts Participation by Parents' Education

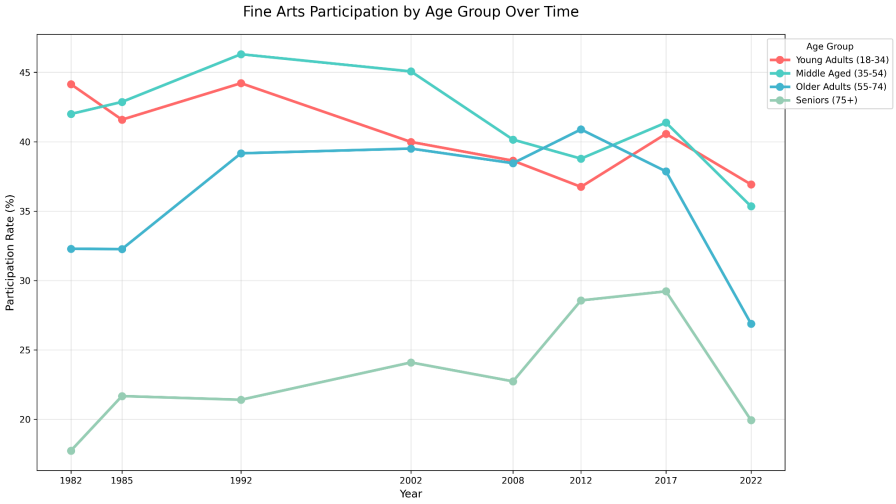
This plot shows the level of arts participation by the education of the respondents' parents, where darker squares mean higher rates of participation and vice versa. Generally, the more educated a person's parents are, the higher the rate of participation.

4. Digital Media



Plot 11: Arts Participation: Pre vs. Post Social Media Era

This examines how the participation rate has differed for various arts activities pre-2010 (pre-social media era), versus post-2010 (post-social media era). Most activities had higher participation rates pre-social media.



Plot 12: Arts Participation by Age GroupOver Time

This plot shows the level of arts participation by age group, and how that's changed over time. While the exact order of groups has changed over time, generally young people have higher rates of participation than older people.

Data Biases

First of all, the GSS dataset is smaller and contains fewer arts-related questions, with the arts questions differing from those in the SPPA. Additionally, although sample sizes in the SPPA datasets were overall similar, many varied in the specific types of arts participation questions asked. As a result, our list of variables to compare from 1982 to 2022 was significantly shortened to account for many null values. Earlier years also show less diversity, particularly regarding some racial and income groups, which limits the information available about how these minorities changed over time. Lastly, our data only goes up to 2022, so any cultural shifts post-COVID, changes in government funding, or other factors in the United States that may have influenced these trends are not captured.

Conclusion

Socioeconomic factors play the biggest role in an individual's level of arts participation. Individuals with higher income and education levels consistently demonstrate higher attendance at live performances and museums. Younger people also have higher attendance. Demographic variables such as race and gender do play a role, albeit a minor one compared to the previously mentioned factors. White individuals have the highest participation, followed by Asian individuals, Native Americans, and Black individuals, in that order, revealing that ethnic minorities have lower participation overall. Women generally have higher rates of participation than men, but not by much. Regardless of these factors, across all groups, arts participation rates have generally gone down.

These findings suggest that arts participation is linked to broader issues of socioeconomic inequality. The persistent influence of socioeconomic status suggests that financial and educational barriers continue to limit opportunities for many individuals, particularly those in marginalized communities. Declining participation rates across all groups raise further concerns about the future of public arts engagement, especially in a time when funding for arts education is shrinking, with implications for policymakers, educators, arts organizations, and community leaders seeking to foster inclusive cultural engagement. Programs aimed at reducing financial and logistic barriers, such as subsidized ticketing, mobile exhibitions, and community-based arts education, could help bridge these caps and improve arts participation rates.

However, while these findings provide a useful overview, they are not without limitations. Since our data was quantitative and not qualitative, human preferences were not taken into account. This analysis focuses on traditional forms of "fine arts" like museums, theater, and classical music concerts. However, lower participation in these categories does not mean that individuals from low-income or marginalized communities are disengaged from the arts altogether. These communities may have artistic traditions of their own that fall outside conventional fine arts definitions, such as public art installations, smaller concerts of their own (folk, hip hop), or breakdancing. So, a dip in participation of certain "fine art" forms may not reflect the artistic interest of people as a whole. Additionally, Covid may have skewed the latest results, leading to the sharp dip in participation seen in 2022.

Further Research

We did not have the opportunity to analyze additional socioeconomic factors, such as language proficiency, internet access or religious affiliation. Additionally, one could analyze the effects of politics on arts participation, especially if a political party affects what kinds of art one supports. On the artists' end, one could analyze the effectiveness of measures taken to increase arts participation across all groups. Measures may include subsidized ticketing, accessibility measures, community based arts education, mobile exhibitions, and more.

Challenge Goals

Multiple Datasets

Four datasets were merged – three of them different years and versions of the Survey for Public Participation in the Arts (SPPA) and one being the 2022 version of the General Social Survey (GSS). We faced more challenges than we expected. Since the datasets were often looking at a wide range of variables that weren't necessarily relevant to what we were analyzing, we had to look through the sometimes more than three hundred columns to find the relevant ones. Additionally, different datasets (even between years) used different conventions for each column, meaning we had to standardize between columns. We also had to manually label the columns for the 1982–2012 iteration of the SPPA, as the columns weren't even labeled.

New Library

We decided to implement Plotly, a new visualization library, to create interactive plots. We believed using this library was appropriate to help break down all of our detailed socioeconomic and demographic related categories, which can become overwhelming to readers, as well as illustrate dynamic data points through each year, which would get messy and crowded if we used a standard approach with solely MatPlotLib. We aimed to learn how to utilize filtering, hover information, and time series visualization, which were unfamiliar before this project. Understanding how the library worked took a small learning curve, but I quickly got familiarized as it was very similar to MatPlotLib. However, the user experience portion of making the plots was what posed the most challenges. First of all, we had to group several columns in different types of ways to create intuitive categories that readers could interpret information quickly. I had to troubleshoot issues related to customizing interactivity and managing performance with larger datasets. This ended up taking 8+ hours, having to scrap plots and redo them because something was grouped wrong.

References

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