

## Milestone 5

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### **Summary of Analysis**

Throughout my analysis of this project, I found a few different interesting facts regarding childcare prices in America. One thing for certain is that there is a clear upward trend in prices for childcare across all age groups – infants, toddlers, and preschoolers. The data was collected from 2008-2022 and there was a clear uptrend during those years. As far as the state level of costs, Texas had the highest total mean cost for infant care, followed by Virginia and Illinois. At the county level, Washington County had the highest average cost, exceeding \$33,000 annually. Infant care was shown to be the most expensive age group for childcare, specifically in urban states like California and New York. Center-based care was also the most expensive type of care compared to other provider types, which showed that there are many challenges associated with becoming a new parent and also being a working parent.

During my analysis, it was assumed that the MCInfant, MCToddler, and MCPreschool columns were a reflection of full-time prices per child. It is also safe to assume that prices were adjusted for inflation by the data source. Counties that were reporting their prices were also assumed to have a good sample size for this project.

A few things that needed clarification are that it was unclear if prices reflected full-time care across all counties or if they varied. Also, household income data was not included in this data so it is hard to make assumptions about whether or not the average household can afford childcare.

The main message that I am trying to get across from my analysis is that childcare is consistently becoming increasingly unaffordable in the United States. Infants and center-based

care is the most expensive out of all age groups and provider types. My analysis shows that there is an unequal distribution across the region for childcare and there are rising cost trends throughout all of America. This pushes for new policies through informed decision-making for the policy makers and it gives an informative introduction to parenting for new parents.

The main audience for my analysis is new parents and parents that are looking to understand how much it really costs to take care of children. Along with parents, this project is dedicated to policy makers who evaluate the programs in each county and provide assistance to new parents. Also, this project is targeted to employers or HR professionals so they can consider family support programs for parents that are working full time with children.

The first medium that is included in my analysis is a Power BI dashboard. I chose this dashboard because it provides an interactive experience for parents who are looking to learn more about childcare costs. The dashboard is essential for analyzing prices by the state, the year, and age group of children. This is ideal for parents but also for policymakers.

The second medium that is included in my analysis is an infographic. This is designed for parents and the general public who are interested in learning more about childcare costs. The visual summarizes the key stats from my data such as the top 5 most expensive states to raise a child in and the top 5 least expensive. It also shows the difference in costs between age groups in those states. This medium is a great way to show this data in a quick and easy to read format.

The third medium included in my analysis is a video explaining the costs of childcare and includes a call to action. This video consists of a human story of a parent and an infant and the numbers behind taking care of the infant. This is intended for social media audiences.

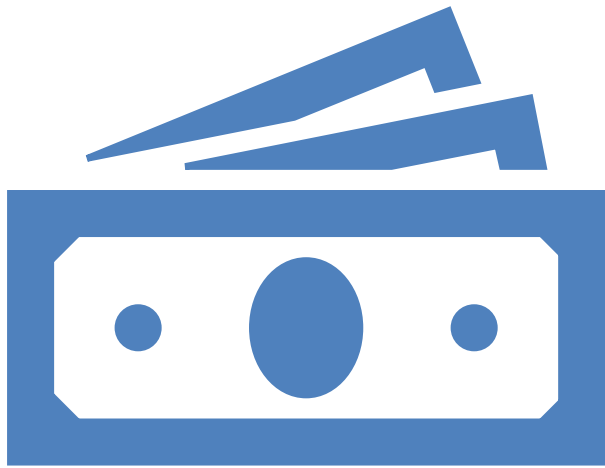
As far as the choices behind the design of the mediums created during my analysis, for the colors of the visuals, warm tones in the visuals represent higher costs and cooler tones

represent affordability. The chart selection played a factor in representing my data as well, I chose line charts to show the importance of the trends of childcare costs. Bar charts were used for comparisons between different states. Clustered columns were used to show the different breakdowns in costs between the age groups. The visuals created during the analysis avoided clutter by limiting the categories and using filters in the Power BI dashboard where the audience can interact with. The video consists of an emotional journey as a parent that consists of the data behind childcare, the problem at hand, the impact on society, and the call to action.

The dataset was initially cleaned by removing any null values in the important price columns and reshaped by unpivoting to allow analysis of comparisons across the age groups. Ethical considerations such as guidelines and risks behind the analysis consists of acknowledging that the data is publicly available but also understanding that there are disparities when visualizing the data without context and can lead to misinterpretation. I made sure to not exaggerate any conclusions in my analysis. There were also transformations in my data like applying filtering such as removing rows with missing prices. This was done without changing any underlying trends. In the visuals, there are notes to show that there are limited rows in some of the counties with missing prices. Regarding credibility and ethics, this dataset was retrieved from the National Database of Childcare Prices which makes it reliable and sourced ethically. It is also maintained by the US Department of Health and Human Services. To mitigate the risks, yesbuiclear labels and filters were used in the dashboard. The video consists of a story that is hypothetical and not based on any personal data.

In a future analysis, I would combine the price data with household income and also employment data to show affordability in a more convincing manner. I would gather any feedback on the visuals created within the dashboard. My favorite part of the analysis was designing the video, using a hypothetical story to explain the data I analyzed. It allowed me to

translate the data into a story that listeners can relate to and feel a connection to. It made the technical aspect of the analysis feel more personal.

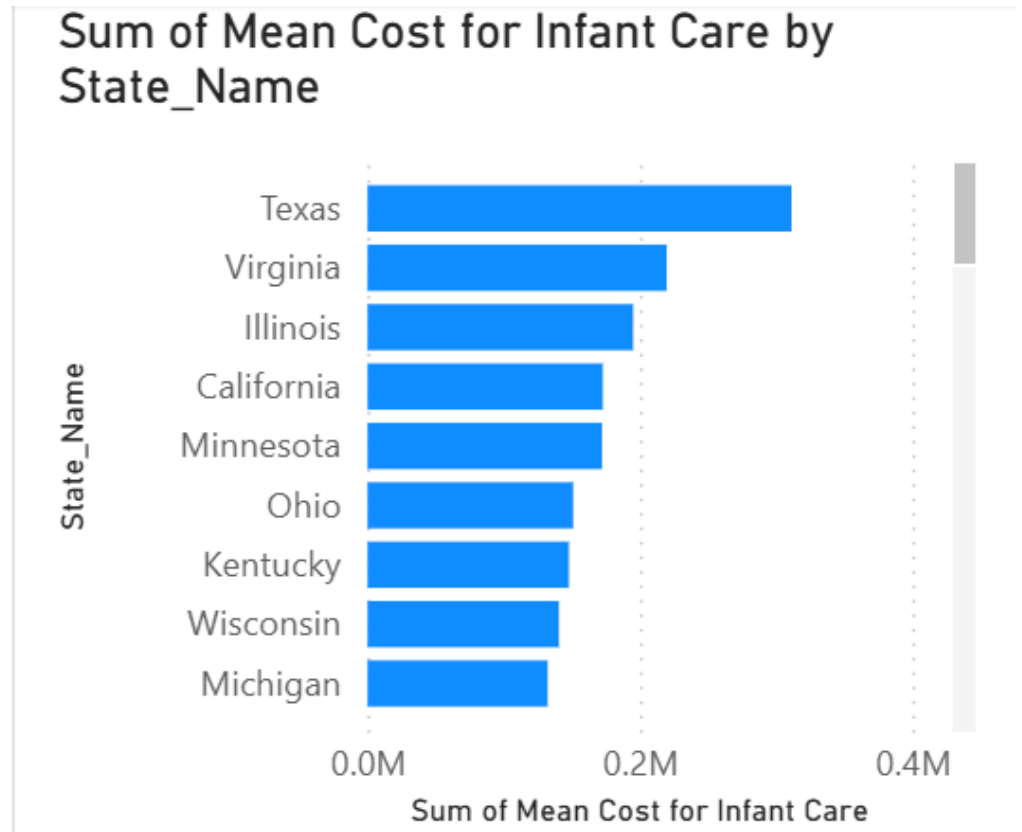


Milestone 5 Final Project  
Power BI • Infographic • Video  
Armin Heldovac

# Childcare Costs

## Visual 1: Mean Cost for Infant Care by State

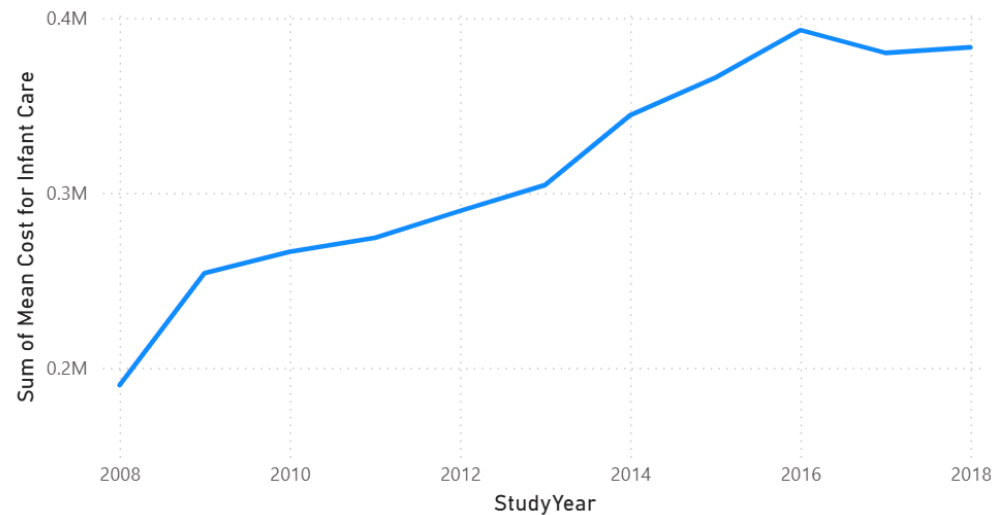
- This bar chart compares average infant care costs across the top states. Texas leads with the highest total mean cost among the displayed states.



## Visual 2: Mean Cost for Infant Care Over Time

- This line chart shows the upward trend in infant care costs from 2008 to 2018, which shows major increases over the decade.

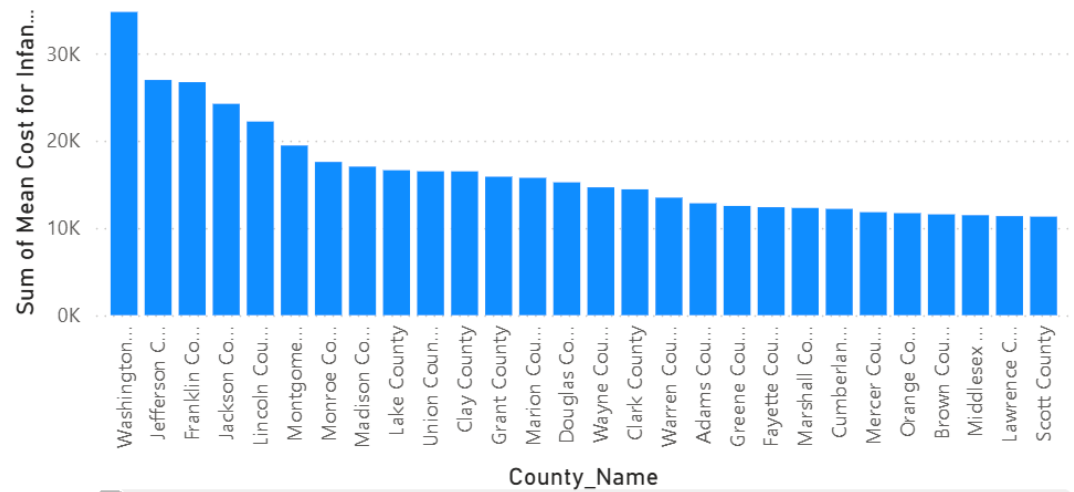
Sum of Mean Cost for Infant Care by StudyYear



## Visual 3: Mean Cost for Infant Care by County

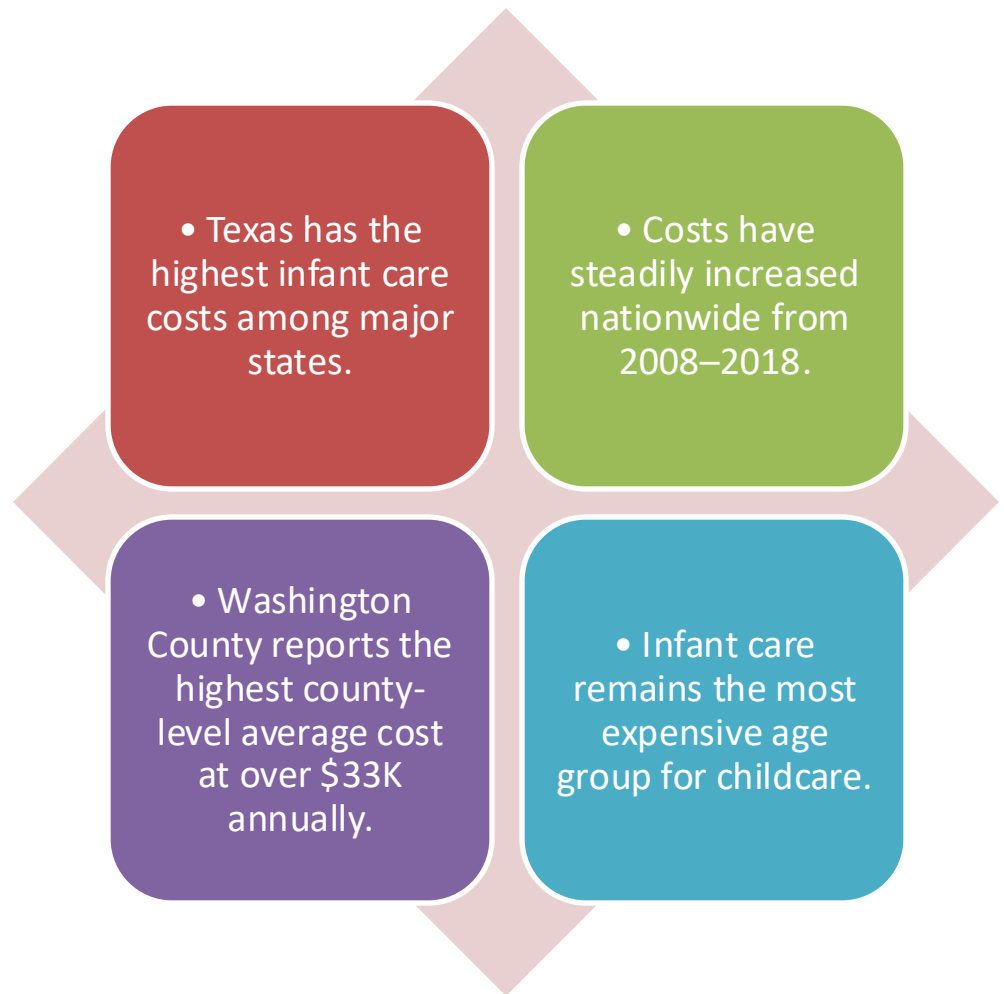
- This bar chart shows the counties with the highest infant care costs, with Washington County being the most expensive to raise an infant.

Sum of Mean Cost for Infant Care by County\_Name





# Infographic: Key Findings on Childcare Costs



# Video Storyboard

Scene 1: Title screen – 'Childcare Costs'

Scene 2: Show line chart with caption 'Costs have doubled since 2008.'

Scene 3: Show state bar chart with caption 'Texas, Virginia, Illinois lead costs.'

Scene 4: Show county bar chart with caption 'Washington County tops at \$33K+ annually.'

Scene 5: Closing message – 'Support affordable childcare solutions.'



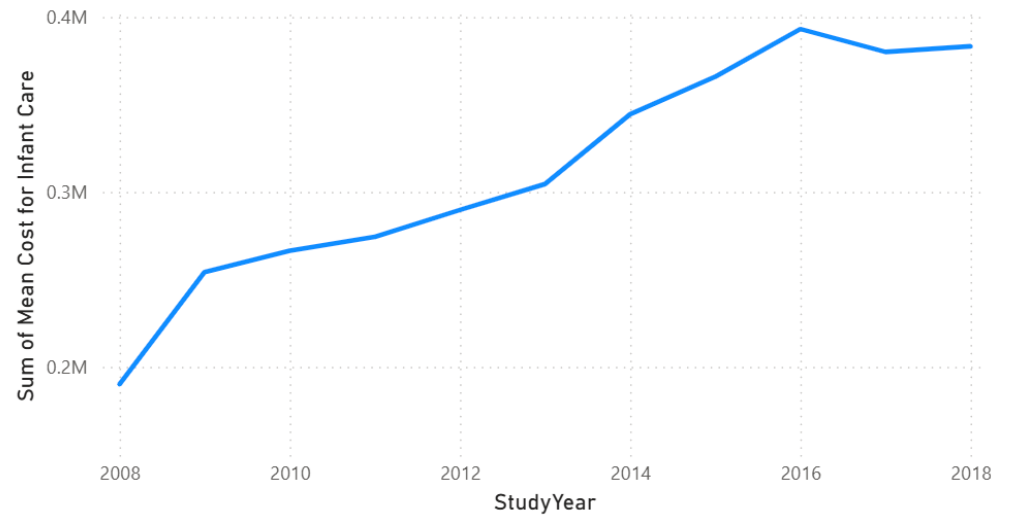
# Childcare Costs

- Trends and Regional Differences

# Childcare Costs Over Time

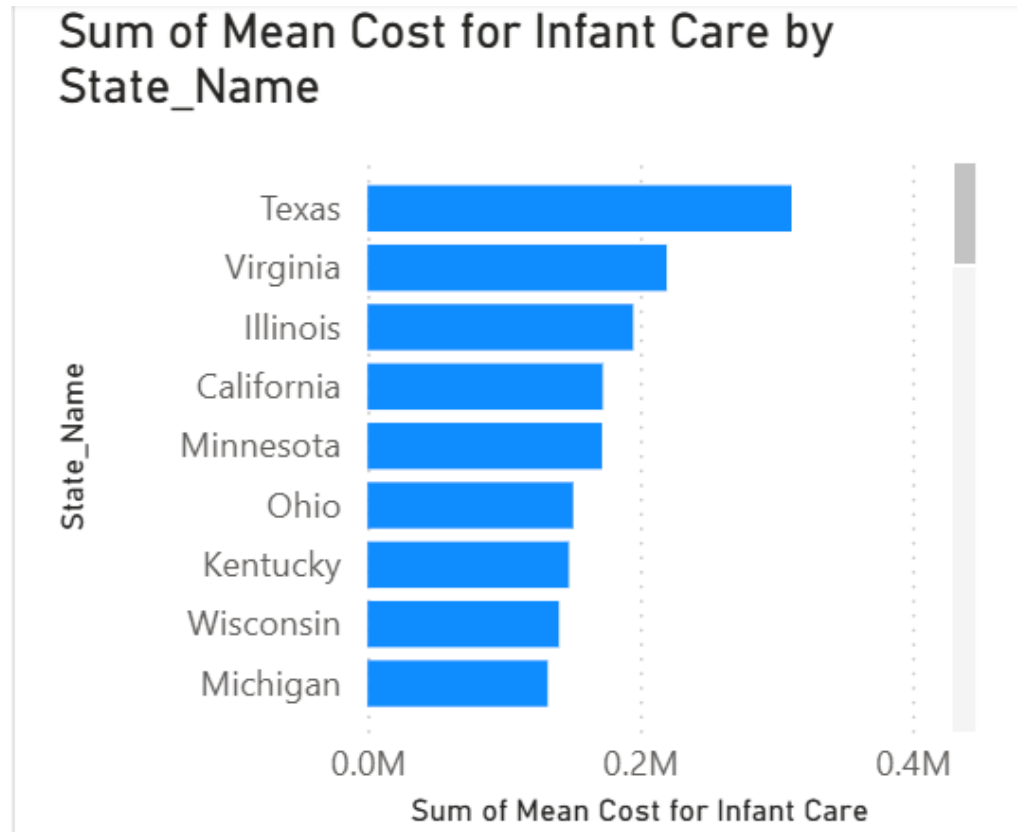
- Costs have doubled since 2008

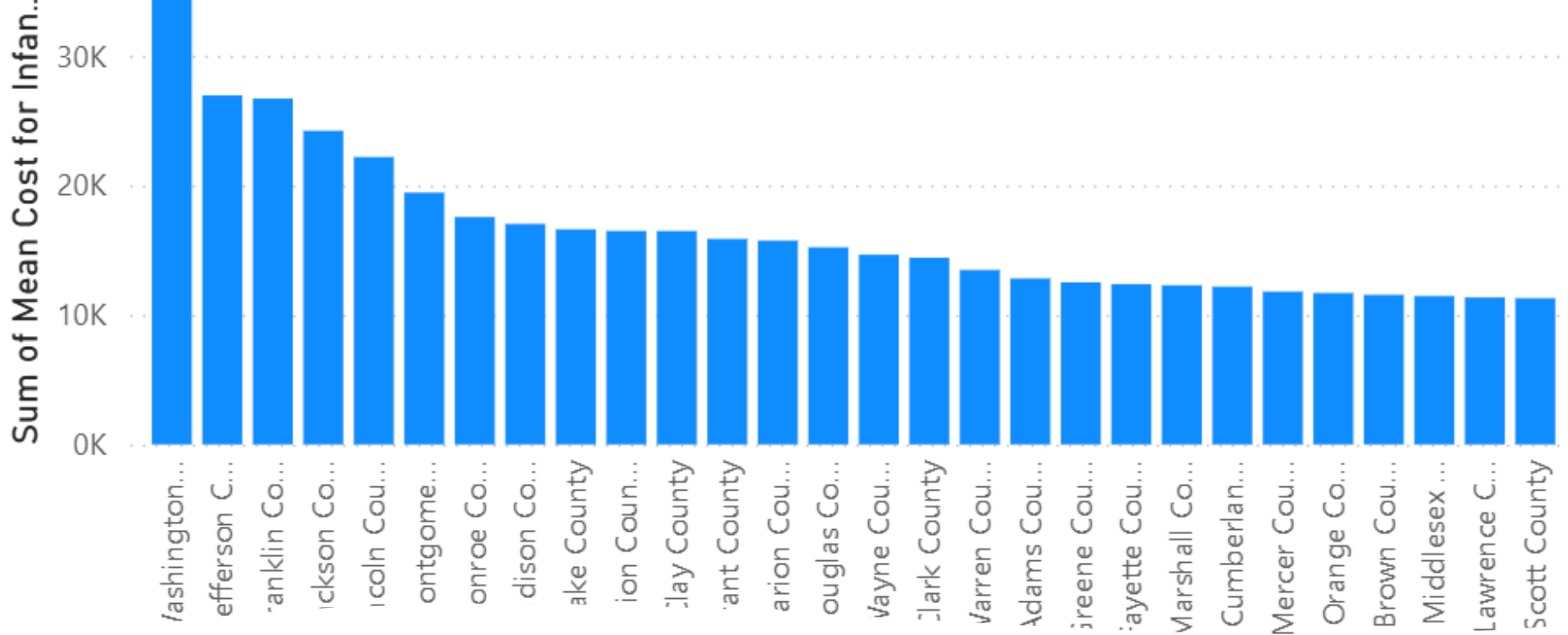
Sum of Mean Cost for Infant Care by StudyYear



# Infant Care Costs by State

- Texas, Virginia, Illinois lead in infant care costs





## Infant Care Costs by County

- Washington County tops at \$33K+ annually

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# Support Affordable Childcare Solutions

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