Economic Trends: The Story of Inflation (2000 to 2023)

Introduction:

For this project, I explored how inflation has shaped economies and daily life between 2000 and 2023. Using open data from the World Bank, I analyzed price changes across different regions and compared them with related trends such as wages, interest rates, and household spending.

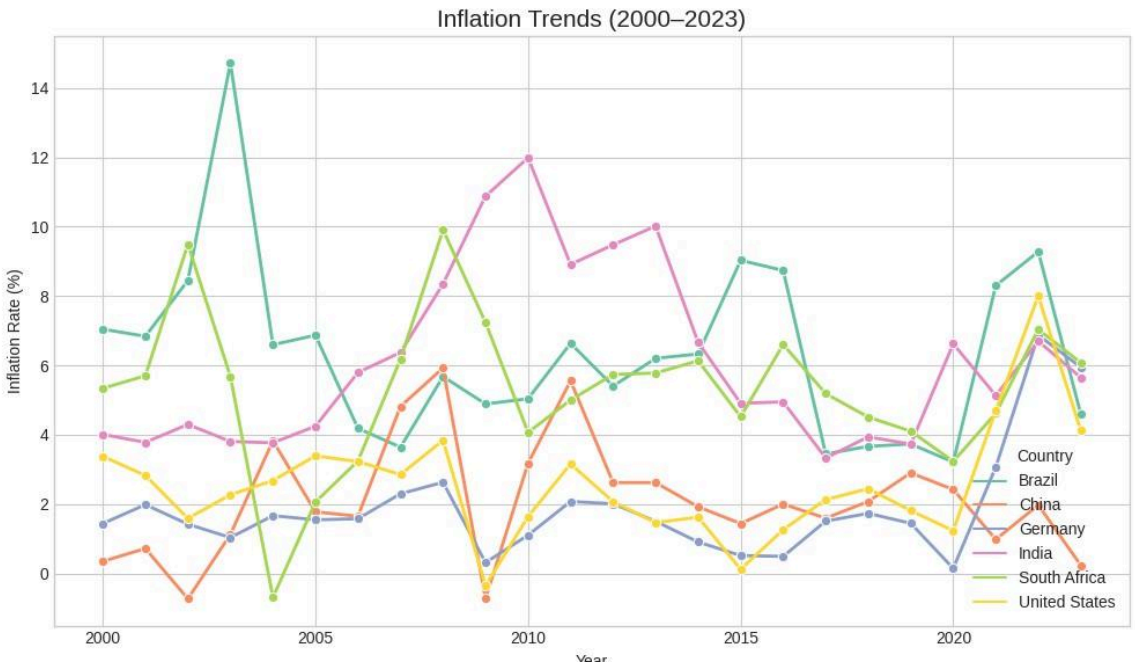
The main goal was to visualize inflation from multiple angles using six unique chart formats. Each one tells a different part of the story while keeping a consistent color theme and clean layout. I used Python in Kaggle for all the data cleaning, transformation, and visualization steps.

1. Global Inflation Trends (Line Chart)

Why I chose it: A line chart makes it easy to see how values change over time. I used it to compare inflation trends in the United States, China, India, Germany, Brazil, and South Africa from 2000 to 2023.

Insight: The visualization clearly shows synchronized inflation spikes around major global events like the 2008 financial crisis and the 2021 to 2022 post-pandemic surge. It captures how global markets are interconnected.

Design choice: I used distinct colors for each country, soft grid lines, and smooth curves to keep the chart readable and visually balanced.

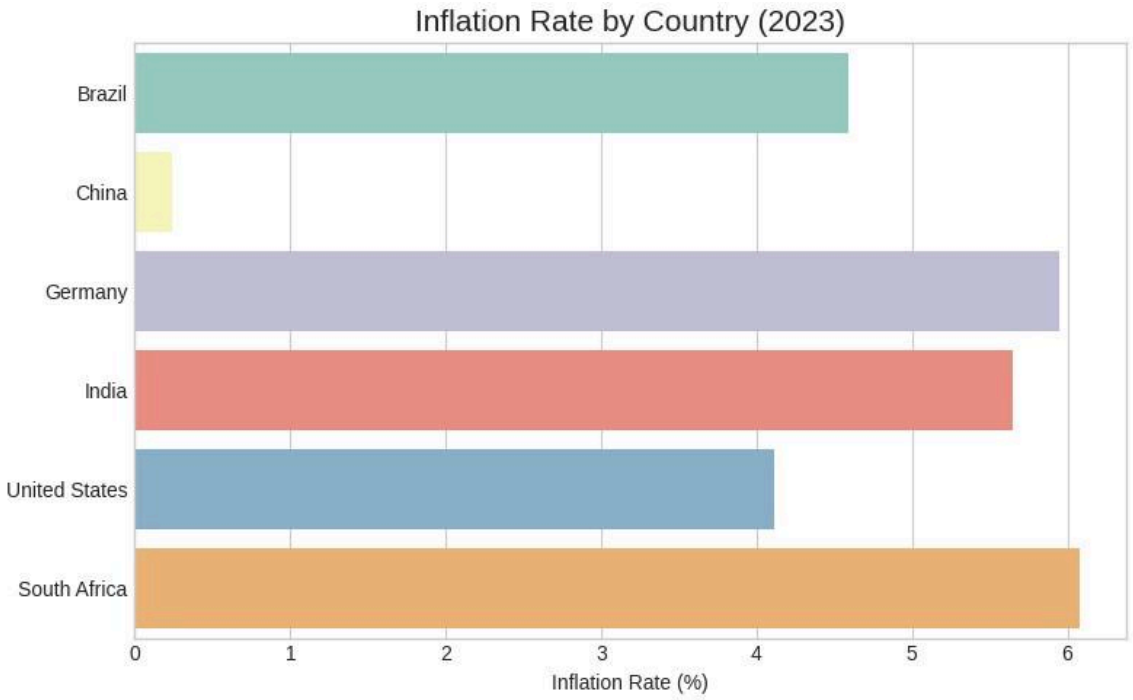


2. Inflation by Country (Bar Chart)

Why I chose it: A bar chart is the best way to compare categorical data in a single year. I used it to highlight inflation rates across the same six countries in 2023.

Insight: The chart shows that emerging economies like Brazil and India experience higher inflation compared to more developed markets such as Germany and the United States. It reflects how currency strength and policy stability affect price levels.

Design choice: I chose a horizontal layout to make country names easier to read and applied a lighter palette to keep the visual minimal and clean.

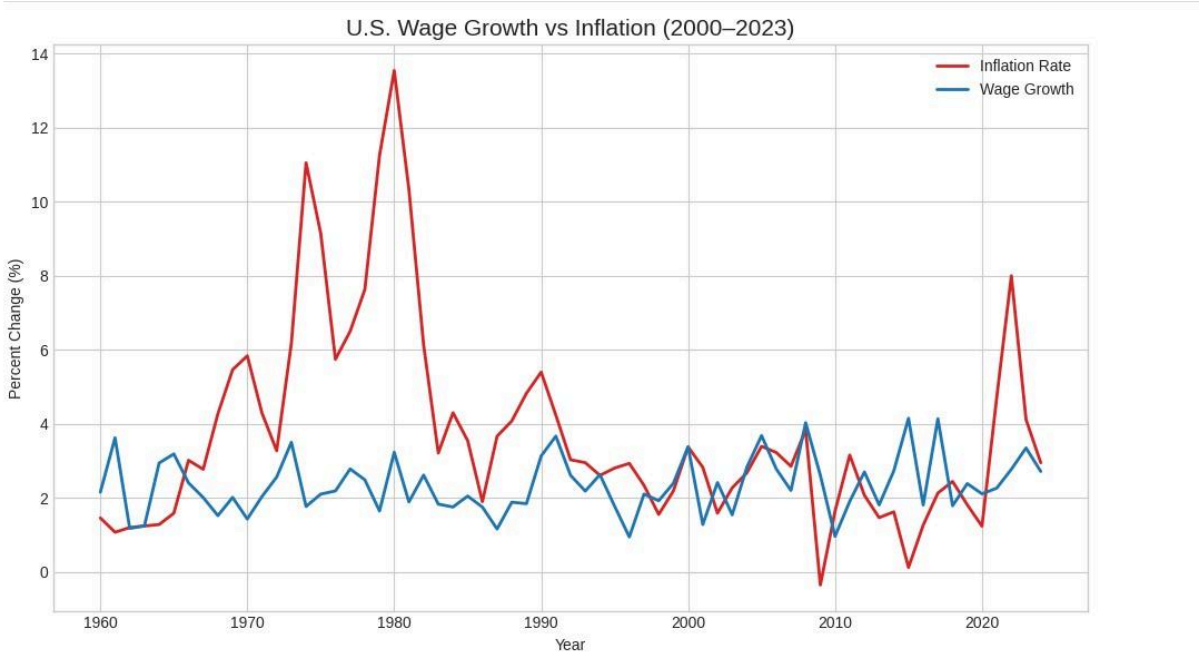


3. U.S. Inflation vs Wage Growth (Dual Line Chart)

Why I chose it: I wanted to compare two continuous time series that interact with each other. The dual line format allows viewers to see when wage growth keeps up with inflation and when it falls behind.

Insight: The chart shows that in several periods, especially after 2021, inflation rose faster than wages, which means real income declined. This helps connect macroeconomic data to everyday life and purchasing power.

Design choice: I used red for inflation and blue for wages to make the relationship instantly clear. Both lines share the same scale to maintain consistency and readability.]

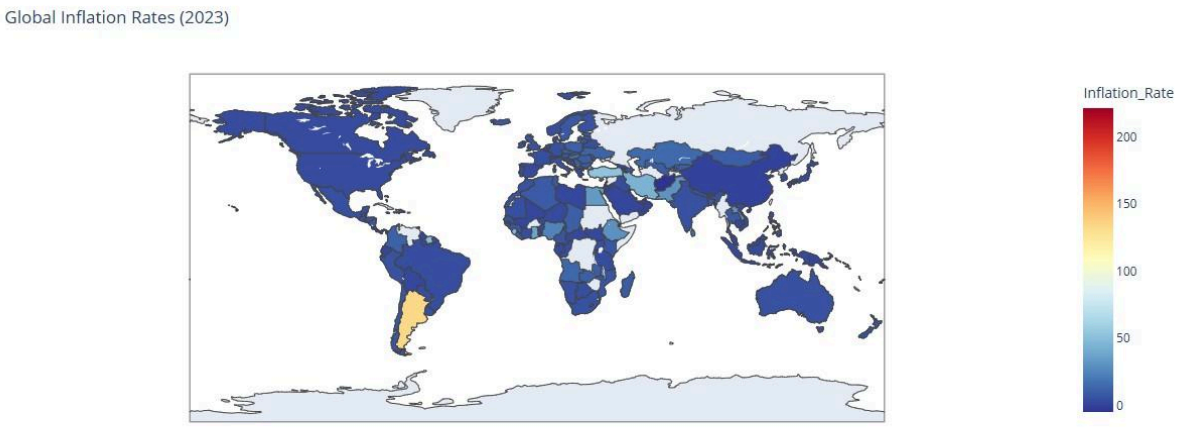


4. Global Inflation Map (Choropleth Map)

Why I chose it: Inflation is a global phenomenon, and a map helps tell that story visually. It adds a geographic layer that shows how different parts of the world are affected at the same time.

Insight: The 2023 global map reveals strong regional contrasts. Many African and Latin American countries had double-digit inflation, while Europe and East Asia remained more stable. This comparison shows how inflation ties to local economies and trade exposure.

Design choice: I used a red-to-blue gradient where red represents higher inflation. The muted gray background keeps attention on the data while ensuring the map remains readable for all regions.

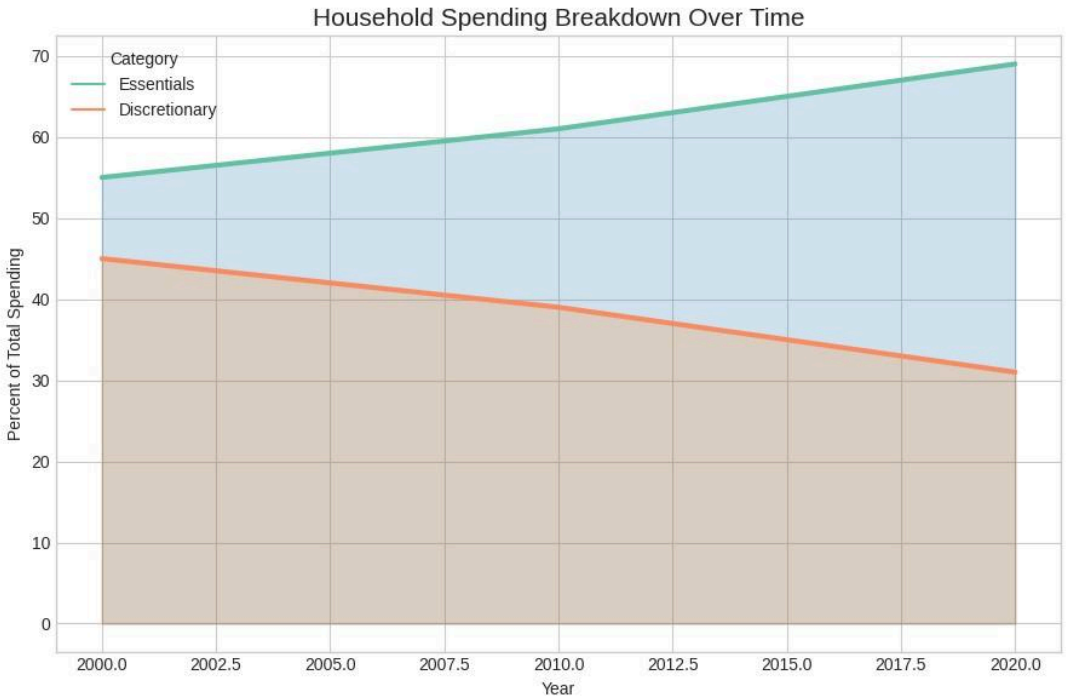


5. Household Spending Breakdown (Stacked Area Chart)

Why I chose it: This format is ideal for showing how components add up to a whole and how they evolve over time. I used it to visualize how household budgets shift between essentials and discretionary spending.

Insight: The stacked area chart shows that as inflation rises, people spend a larger share of income on essentials like food, housing, and utilities. It demonstrates the real-world pressure inflation places on families.

Design choice: I kept the palette simple with blue for essentials and orange for discretionary spending. The smooth transitions and transparency make it easy to track trends without clutter.

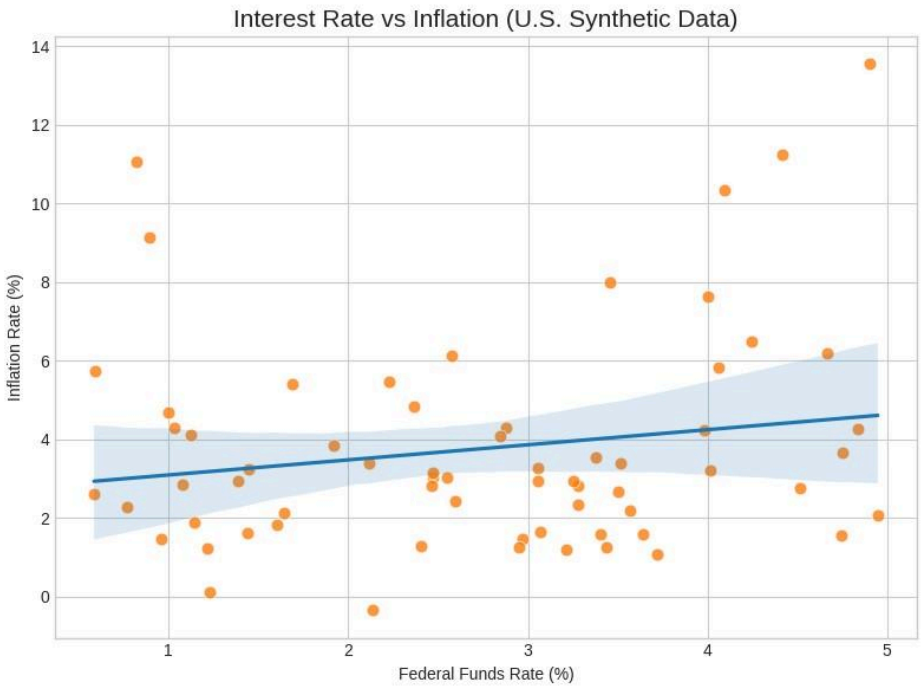


6. Interest Rate vs Inflation (Scatter Plot)

Why I chose it: Scatter plots are perfect for showing relationships between two continuous variables. I used it to visualize how changes in interest rates relate to inflation levels.

Insight: The plot suggests a negative correlation. Higher interest rates often correspond to lower inflation. It connects central bank policy to economic outcomes.

Design choice: I added a regression line for clarity and used warm tones for data points to make the relationship feel more intuitive and easy to interpret.



Color and Layout Decisions

I wanted the visuals to feel consistent and professional without distraction. The color palette uses deep blue as the primary color for stability and orange as the accent for contrast. I used white and gray as neutrals to maintain visual balance. Labels, fonts, and legends stay consistent across all charts so viewers can focus on insights rather than format differences.

Conclusion

This project helped me connect data analysis with storytelling. I learned how each visualization type highlights a different part of the economic picture. Time-series charts showed trends, bar charts revealed comparisons, the map added geography, and scatter plots explained relationships.

Inflation data can be overwhelming when presented as numbers, but visualizing it made it human and relatable. It shows how prices influence wages, spending, and global balance. More than anything, this project reinforced how design, structure, and color choices can transform raw data into a clear story that anyone can understand.