

# Nuclear Explosions in the World

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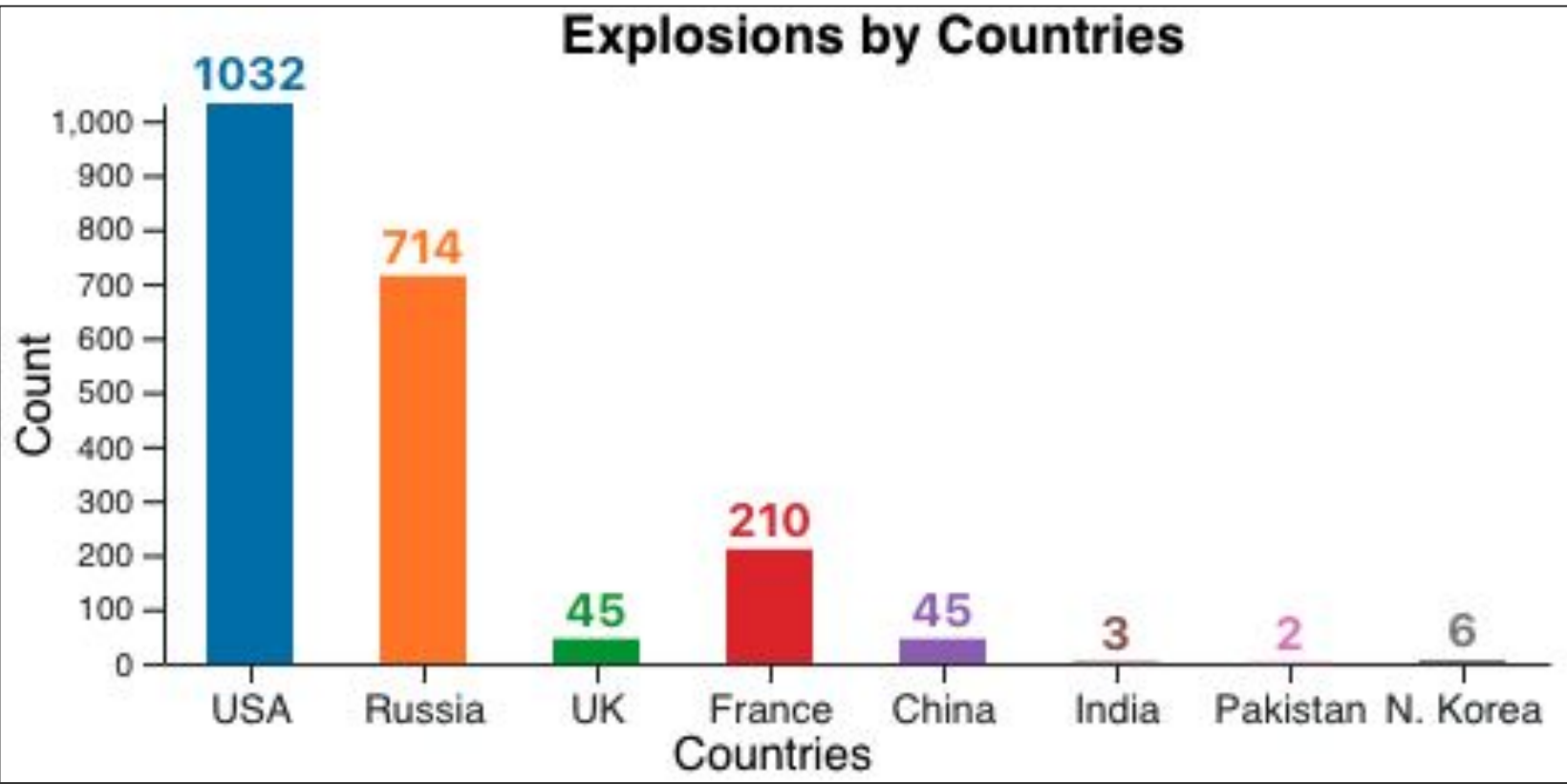
## INTRODUCTION

Till today, more than 2000 nuclear explosions have been conducted, either as a military exercise or weapons development or any other reason that deems to be necessary by the country. While recent nuclear explosions have been on a decreasing trend after the Cold war ended. Most of the countries still own many nuclear warheads, with the total count reaching almost **13,500** for the year 2020. With the current geopolitical situation and the growing tensions between the countries, this becomes more and more relevant to the people at large.

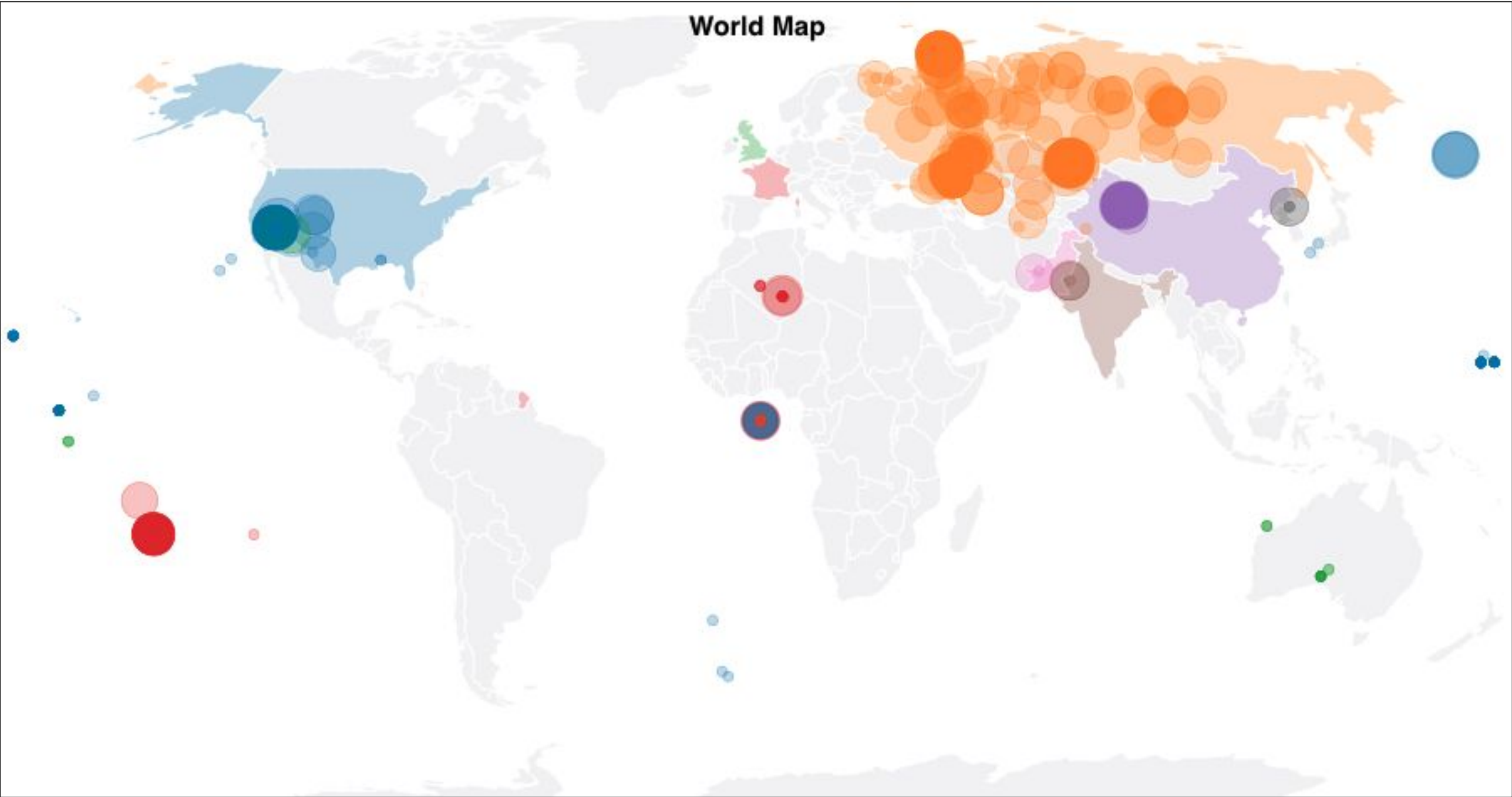
## VISUALIZATION

Our primary goal was to represent the entire data country-centric, hence we have color-coded the countries, and consistently used it in the dashboard.

- Standard Visualizations
  - Bar Charts & Stacked Bar Charts
  - Line Chart
  - Stacked Area Chart
- Non-standard Visualizations
  - World Bubble Map
  - Parallel Coordinate Plot (PCP)

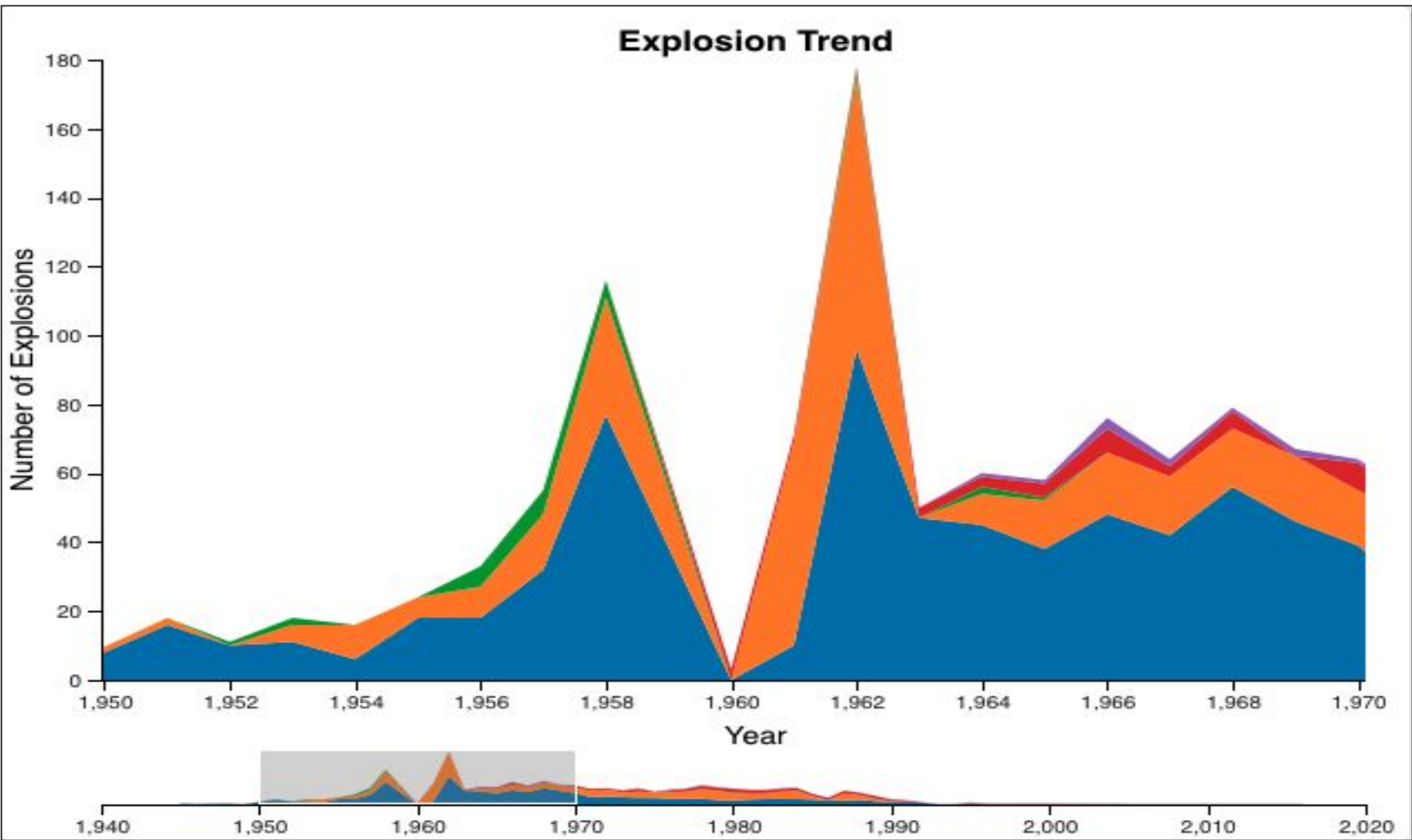


## WORLD MAP DEPICTING HISTORY OF NUCLEAR EXPLOSIONS



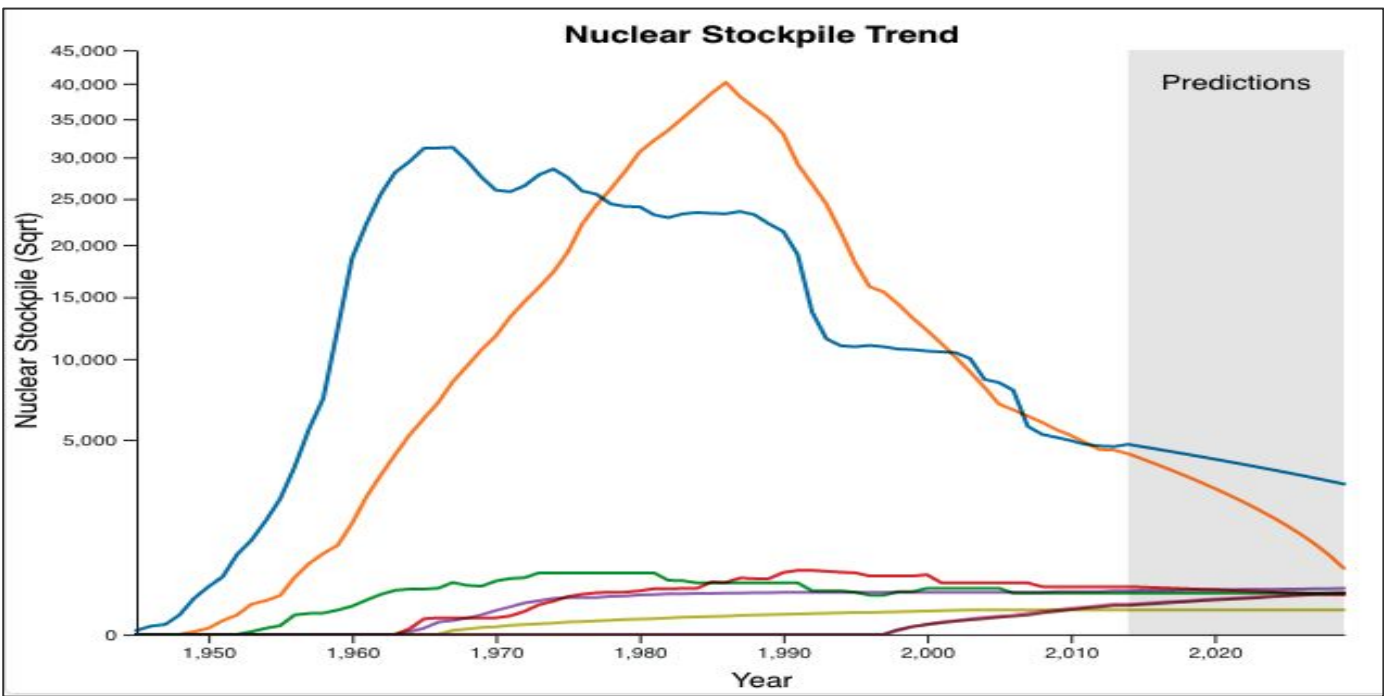
## INTERACTIONS

- Zoom & Pan
- Filtering
- Brushing & Linking
- Reordering PCP Axes
- Hovering



## ANALYTICS

- Descriptive analytics
  - Generated Barcharts, PCP, and Linechart to analyze different attributes of the data
- Predictive analytics
  - Forecasted nuclear stockpile for 15 years by country



## INFERENCES

- Only underground tests were conducted after 1970s by US and Russia
- US has the performed most nuclear explosions, however Russia has the top 10 nuclear explosions by magnitude
- Significant drop after a rising peak in the nuclear explosions in 1962 can be accounted to Cuban missile crisis
- All high yield nuclear explosions were conducted atmospheric

## REFERENCES

- <https://thebulletin.org/nuclear-notebook/>
- <https://ourworldindata.org/nuclear-weapons>