**Various Trends of Technology According To World Bank data**

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**Summary**

Based on World Bank data records and statistics from various countries, an analysis of various visualizations using a range of indicators revealed their global impacts and effects. The investment percentages for various nations over time are visible to us, and they provide insight into global development. showcasing multiple visualizations that blend statistics from World Bank data with a variety of technology indicators. contrasting and comparing the technological capabilities of various countries.

**Data Source: World Bank data**

LINK:

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Presenting several visualizations that combine a range of technological indicators with World Bank data statistics. comparing and contrasting technological aspects of different nations.

**Graph 1:**

A graph of blue bars

Description automatically generated

**Histogram**

The histogram visualization above indicates that expenditure on research and development. As we can see, all the values are higher, indicating an increase in GDP percentage. In this case, the skewness is positive, meaning that all the countries are spending more on research and development worldwide.

**Graph 2:**

A pie chart with text on it

Description automatically generated

**Pie Chart**

The above-mentioned visualization of the pie chart indicates that the research and development expenditures of India, Germany, the United States, the United Kingdom, and the United Arab Emirates are shown. It demonstrates that India has the lowest percentage, which is 6.7%, and Germany has the highest percentage of 31.9% It is evident that India has the lowest investment in Research and Development expenditures, while Germany has the highest expenditures.

**Graph 3:**

**A graph of blue and red bars

Description automatically generated**

**Bar Plot**

The bar plot visualization above shows the global patent application percentage for residents and non-residents from 2014 to 2021. Except for 2013, it shows that non-residents have always applied for patents at a higher rate than residents.

**Graph 4:**A graph with different colored lines

Description automatically generated

**Line Graph**

The United States, Germany, the United Kingdom, India, the United Arab Emirates, and the United States of America have the highest percentage of high technology exports from 2013 to 2021, as seen in the line graph visualisation above. The United Arab Emirates exhibits a marked shift in the percentage of High Technology Exports, while the other countries show fluctuations in this regard.

**Graph 5:**

**A graph of blue and red rectangles

Description automatically generated**

**Bar Plot**

The percentages of technicians and researchers in R&D from 2013 to 2018 are shown in the bar plot visualisation above. Research expenses in R&D regularly surpass those of technicians, suggesting that more resources are allocated to research in R&D than to technicians.

**Graph 6:**

**A graph with different colored lines

Description automatically generated**

**Line Graph**

The Scientific and Technical Journal Articles from Canada, Qatar, Saudi Arabia, Switzerland, and Germany from 2013 to 2018 are displayed in the line graph visualization above. The percentages for each of the aforementioned nations increased between 2013 and 2018. It claims that over the years, these nations have made good investments in articles from scientific and technical journals.

Taking into account all the information, the aforementioned visualizations show the changes over the years in numerous countries worldwide in the areas of high technology exports, industrial design applications used by residents and non-residents, patent applications by residents and non-residents, research and development expenditures, articles published in scientific and technical journals, research in R&D, and technicians in R&D.