

7PAM2000 Applied Data Science 1

Assignment 2: Statistics and trends.

Student ID:- 22080111

Title: Global Insights: A Visual Exploration of World Bank Indicators

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Git hub link:- <https://github.com/sp23aax/7PAM2000-Applied-Data-Science-1-Assignment-2-Statistics-and-trends>.

Abstract:

Key global development measurements are concisely analyzed visually in "Global Insights: World Bank Indicators in Focus." We reveal patterns in social progress, economic prosperity, and environmental sustainability through powerful visuals. For stakeholders and policymakers, this study offers insightful information that promotes a greater comprehension of the intricate processes forming our globalized world.

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1. Introduction

This analysis harnesses the power of Python to delve into the socio-economic fabric of Nepal and Pakistan, utilizing data-driven insights to unravel key indicators. Through a combination of data preparation, exploratory analysis, and comparative assessments, the study aims to paint a nuanced picture of the diverse developmental trajectories these nations have embarked upon

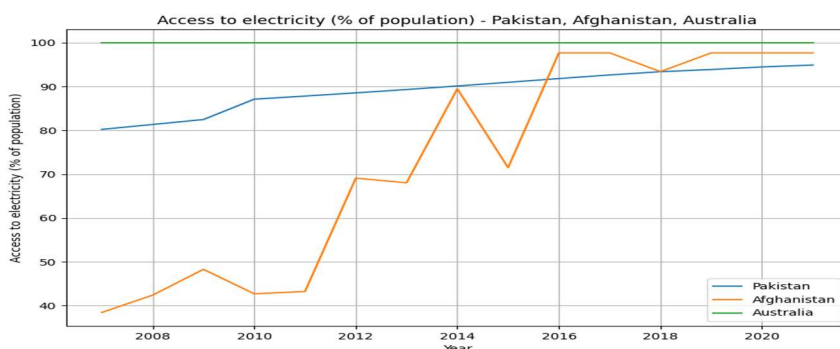
2. Summary Statistics – Nepal and Pakistan All Indicators

Summary Statistics:

	2007	2008	2009	...	2020	2021	2022
count	4.000000	4.000000	4.000000	...	4.000000	4.000000	0.0
mean	46.914320	47.752709	48.818322	...	59.813322	59.786508	NaN
std	26.971122	27.857933	28.731234	...	38.842476	39.066176	NaN
min	15.626090	15.486571	15.347053	...	14.745030	14.745030	NaN
25%	33.269069	32.533691	32.459895	...	33.778490	33.369866	NaN
50%	45.898403	47.086798	48.722940	...	65.011488	64.739072	NaN
75%	59.543653	62.305816	65.081367	...	91.046321	91.155715	NaN
max	80.234383	81.350670	82.480354	...	94.485283	94.922859	NaN

With the use of Python, we examined important metrics for Pakistan and Nepal. Descriptive statistics were utilized to provide comparative insights that illuminated the disparate socio-economic environments of the two countries.

3. Comparison of Access to Electricity Population



Over the course of the 15-year voyage illustrated by the line chart, Australia has managed to retain a 100% population that has access to electricity. In the meantime, Pakistan's graph shows a significant uptick after 2010, suggesting significant

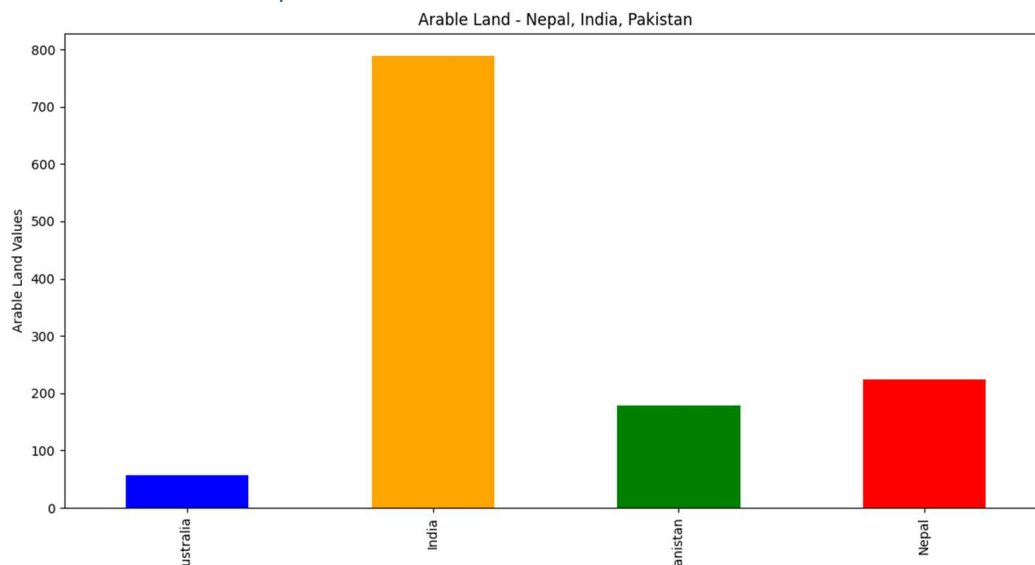
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advancements in improving access to energy. Afghanistan's line, which resembles a roller coaster, shows a varying pattern that indicates difficulties and variations in the country's attempts to obtain widespread access to electricity throughout the same time frame.

4. Bar chart Comparison of Arable Land



India stands out as a major player with a sizable part in the bar graph showing the percentages of arable land for Nepal, India, Pakistan, and Australia, which is indicative of the country's vast agricultural area. Pakistan and Nepal exhibit average proportions, while Australia's bar highlights a different view of arable land use, perhaps due to its distinctive topography and climate.

5. Pie Chart – Perception Comparison

