Title: Analysing and Visualizing COVID-19 Data in India

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Objectives:

- Analyse COVID-19 data in India to understand spread and impact.
- Identify states with highest cases, active cases, recoveries, and deaths.
- Examine trend of cases over time and growth rate.
- Compare COVID-19 situation in states and assess control measures.
- Explore monthly trends in cases, recovery rate, and fatality rate.
- Analyse vaccination data and its impact on cases.
- Investigate correlation between vaccination rates and case decline.
- Assess effectiveness and regional variations in vaccination campaigns.
- Provide insights for decision-making and resource allocation.
- Present visualizations and summaries to communicate findings.

Outcomes:

- Comprehensive analysis of COVID-19 spread and impact across states and time.
- Identification of states with highest cases, recoveries, and deaths.
- Visualize trends in daily cases and growth rate.
- Comparative analysis of COVID-19 situation and containment measures in states.
- Examine monthly trends in cases, recovery rate, and fatality rate.
- Evaluate vaccination progress and its impact on cases.
- Investigate correlation between vaccination rates and case decline.
- Assess effectiveness of state vaccination campaigns.
- Provide insights for decision-making and resource allocation.
- Communicate findings through visualizations and summaries.

Architecture:

- Importing necessary libraries
- Reading the data
- Data pre-processing
- Data exploration
- Analysis of monthly trends
- Vaccination data analysis
- Data visualizations

Conclusion:

The research project analysed COVID-19 data in India, revealing insights into spread and impact. Key findings include identifying states with highest cases, analysing trends, and evaluating vaccination effectiveness. Valuable insights on state-wise distribution of cases and vaccination rates support decision-making and resource allocation for targeted interventions, aiding policymakers in formulating mitigation strategies.