



# *COVID-19 Unemployment Rate in India*

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# Problem Statement

Due to the COVID-19 pandemic, there was a sharp increase in unemployment in India. This project aims to analyze the unemployment rate before and during the pandemic to understand its impact.

## Objective

- Measure the change in unemployment rates from 2019 to 2020.
- Identify which areas (urban or rural) were more affected by unemployment.
- Analyze the monthly trends to pinpoint when the highest unemployment rates occurred.
- Compare unemployment rates across different states to see if some states were more affected than others.

# Data Source

The data used in this project was sourced from the Kaggle website, a popular platform for data science and machine learning datasets. This dataset contains the unemployment rate of all the states in India

Region	Date	Frequency	Estimated Unemployment Rate (%)	Employed Rate (%)	Estimated Employed	Estimated Labour Participation Rate (%)	Area
Andhra Pradesh	31-05-2019	Monthly	3.65	96.35	11999139	43.24	Rural
Andhra Pradesh	30-06-2019	Monthly	3.05	96.95	11755881	42.05	Rural
Andhra Pradesh	31-07-2019	Monthly	3.75	96.25	12086707	43.5	Rural
Andhra Pradesh	31-08-2019	Monthly	3.32	96.68	12285693	43.97	Rural

# Data Preprocessing

- Data Cleaning: Checked for and handled missing values in all tables to ensure data completeness.
- Data Type Conversion: Ensured all columns were in the correct data type format (dates, numeric, categorical) for accurate analysis.
- Data Transformation: Created a Date column to extract Year, Month, Weekday, and Weekend for trend analysis.
- DAX Calculations: Set up necessary calculated columns and measures for detailed insights.

# Dashboard Overview

## India Covid 19

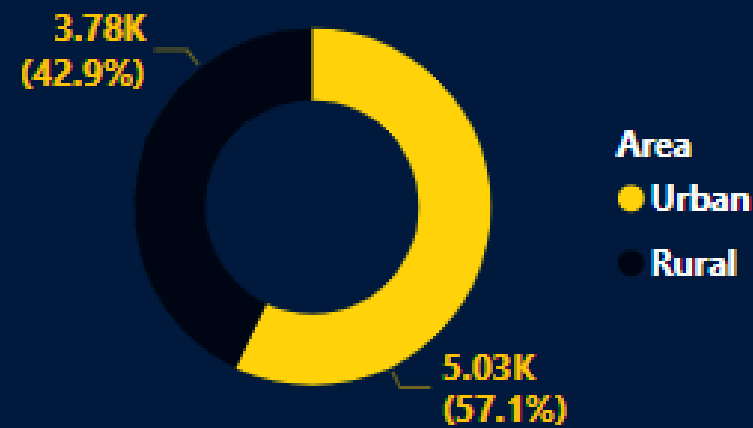
### Unemployment Rate

Year

2019

2020

#### Unemployed Rate by Area



State

Andhra Pradesh

Assam

Bihar

Chandigarh

Chhattisgarh

Delhi

Goa

Gujarat

Haryana

Himachal...

Jammu &...

Jharkhand

Karnataka

Kerala

Madhya...

Maharashtra

Meghalaya

Odisha

Puducherry

Punjab

Rajasthan

Sikkim

Tamil Nadu

Telangana

Tripura

Uttar Pradesh

Uttarakhand

West Bengal

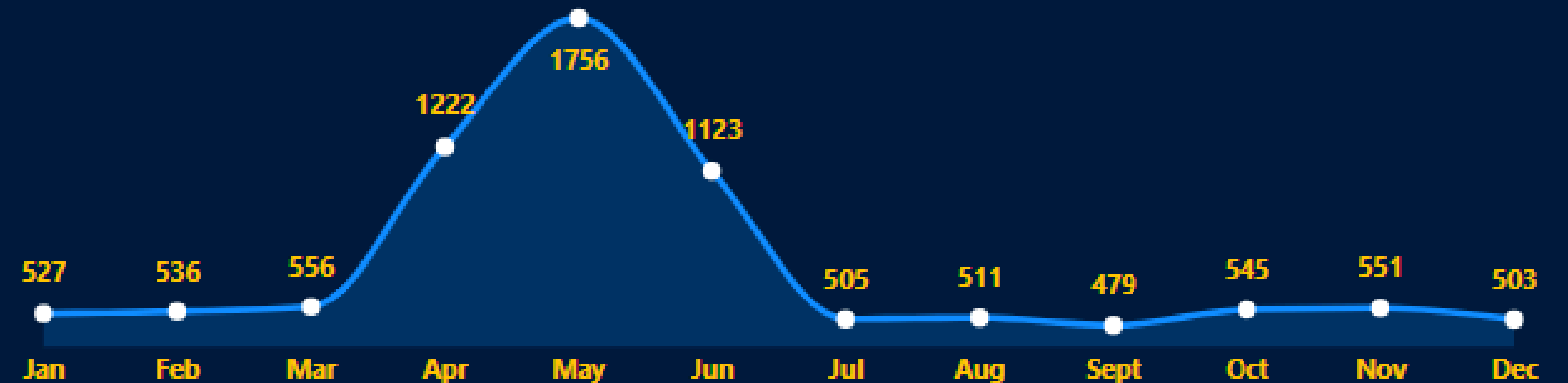
8.81K

Total Unemployed Rate

28

Total State

#### Unemployed Rate by Month



Month

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sept

Oct

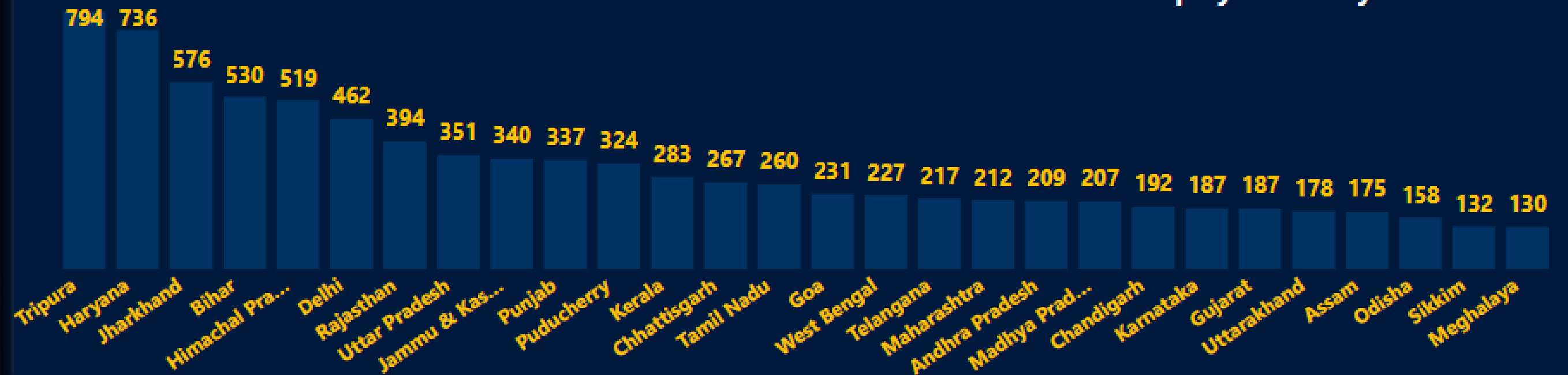
Nov

Dec

Employment Rate

Insight

#### Unemployed Rate by State



# 2019 Unemployment Rate Dashboard

## India Covid 19

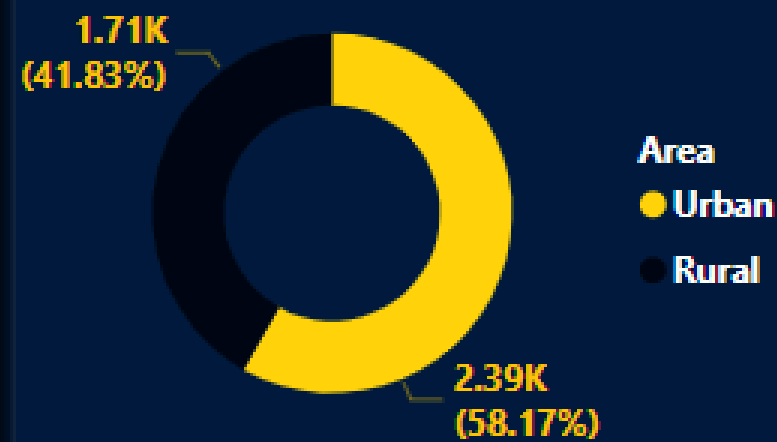
### Unemployment Rate

Year

2019

2020

#### Unemployed Rate by Area



State

Andhra Pradesh

Assam

Bihar

Chandigarh

Chhattisgarh

Delhi

Goa

Gujarat

Haryana

Himachal...

Jammu &...

Jharkhand

Karnataka

Kerala

Madhya...

Maharashtra

Meghalaya

Odisha

Puducherry

Punjab

Rajasthan

Sikkim

Tamil Nadu

Telangana

Tripura

Uttar Pradesh

Uttarakhand

West Bengal

4.10K

Total Unemployed Rate

28

Total State

#### Unemployed Rate by Month



Month

May

Jun

Jul

Aug

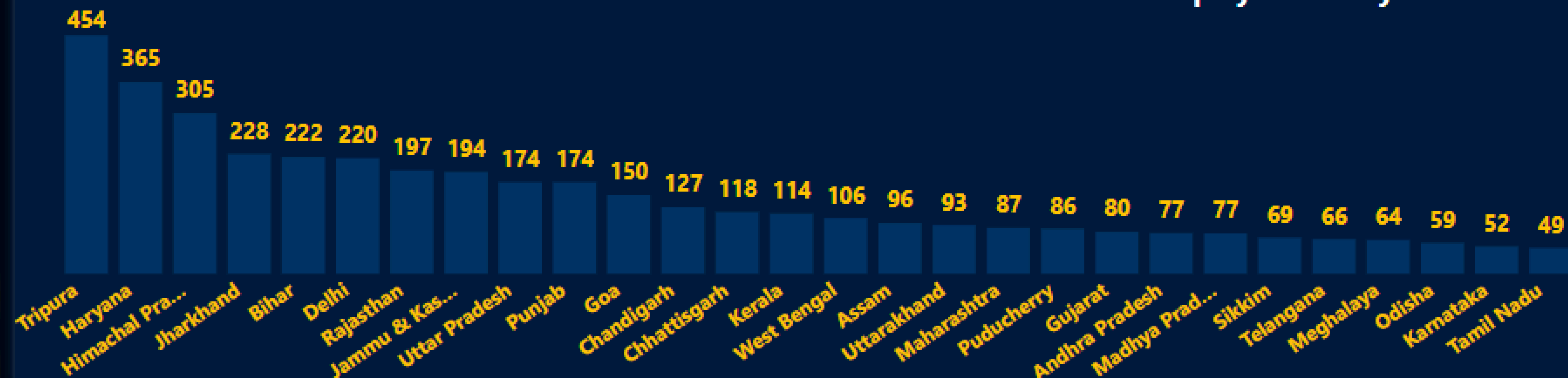
Sept

Oct

Nov

Dec

#### Unemployed Rate by State



Employment Rate

Insight

# 2019 Unemployment Rate Finding & Insights

## Findings

- The total Unemployment Rate in 2019 was 4.10K and the Total States Analyzed in 28 states.
- The unemployment rate fluctuated throughout the year. It started at 488 in May, peaked at 551 in November, and ended at 503 in December. There is a gradual increase towards the end of the year.
- The Urban Unemployment Distribution rate is 1.71K (41.8%) and the Rural Unemployment Distribution rate is 2.39K (58.17%). Rural areas had a higher unemployment rate compared to urban areas, indicating that rural regions were more affected by unemployment.
- Tripura, Haryana, and Himachal Pradesh had the highest unemployment rates, suggesting significant economic challenges in these states. In contrast, Tamil Nadu, Odisha, and Meghalaya had the lowest unemployment rates

## Key Insights

- The unemployment rate increased towards the end of 2019, peaking in November.
- Rural areas had a higher proportion of unemployed individuals compared to urban areas.
- There was a significant variation in unemployment rates across states, with some states experiencing much higher rates than others.



# 2020 Unemployment Rate Dashboard

## India Covid 19

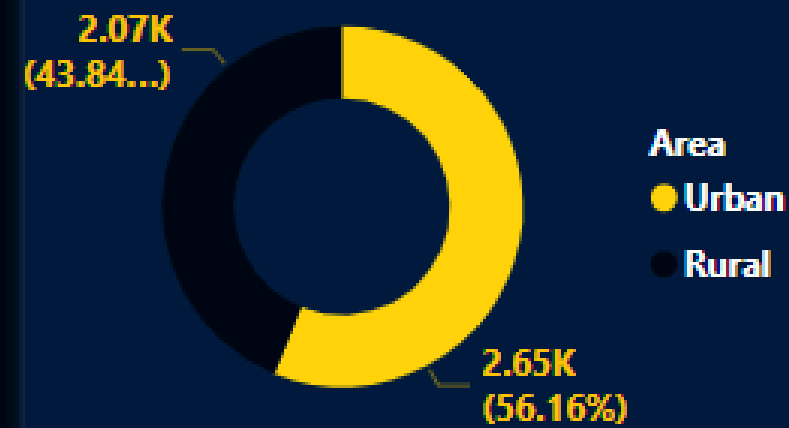
### Unemployment Rate

Year

2019

2020

#### Unemployed Rate by Area



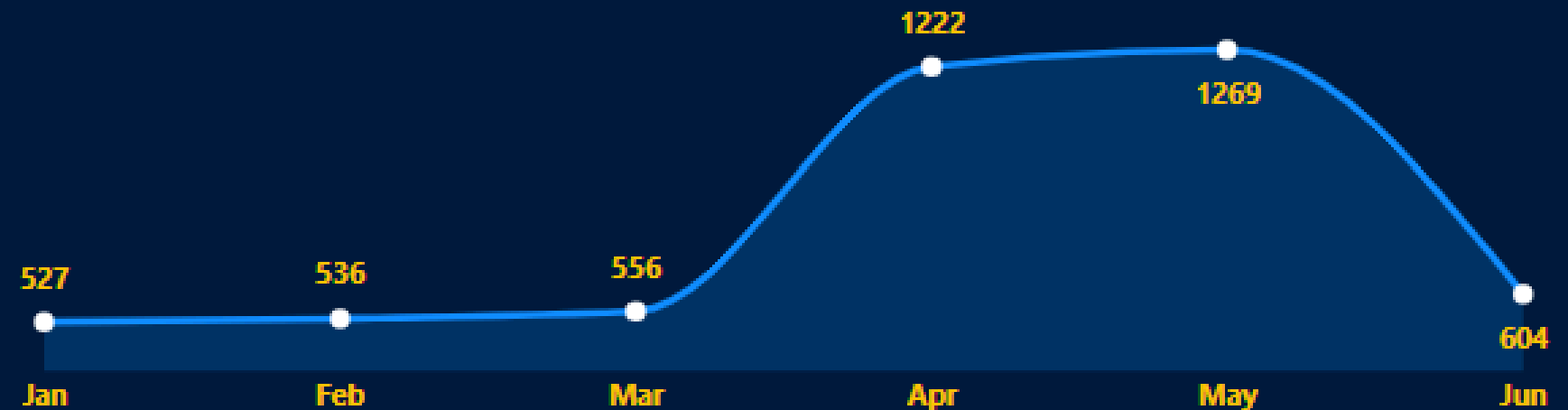
4.71K

Total Unemployed Rate

28

Total State

#### Unemployed Rate by Month



Month

Jan

Feb

Mar

Apr

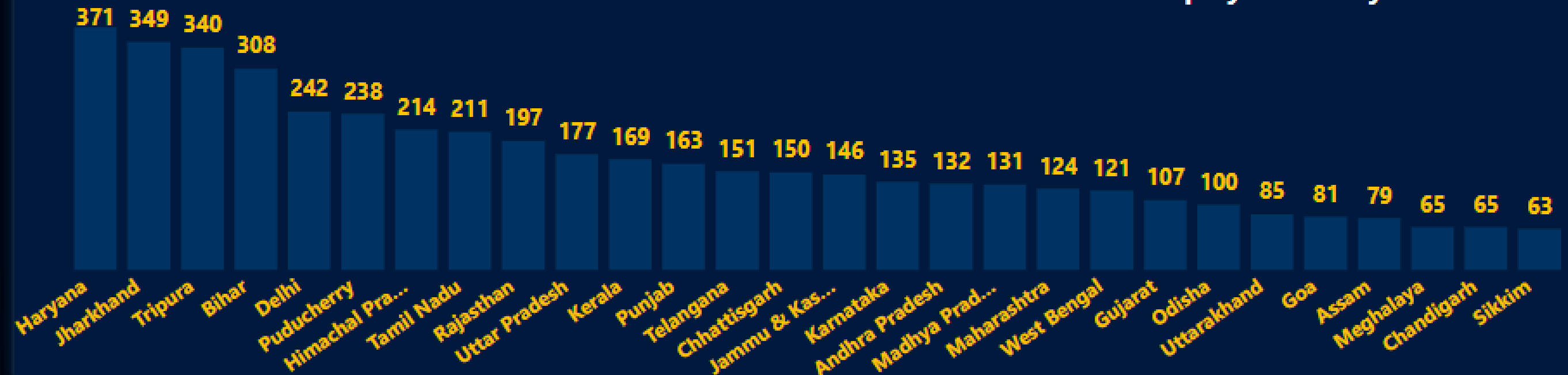
May

Jun

Employment Rate

Insight

#### Unemployed Rate by State



# 2020 Unemployment Rate Finding & Insights

## Findings

- The total Unemployment Rate in 2020 was 4.71K and Total States Analyzed was 28 states
- The unemployment rate saw a sharp increase in April and May, with the highest rate in May (1,269). It decreased significantly in June to 604.
- The Urban Unemployment rate is 2.07K (43.84%) and The Rural Unemployment is 2.65K (56.16%). Rural areas continued to have a higher unemployment rate compared to urban areas, similar to the trend in 2019.
- Haryana, Jharkhand, and Tripura had the highest unemployment rates, indicating significant economic challenges in these states. On the other hand, Sikkim, Chandigarh, and Meghalaya had the lowest unemployment rates.

## Key Insights

- The unemployment rate spiked in April and May, reflecting the impact of the COVID-19 pandemic on the job market.
- Rural areas had a higher proportion of unemployed individuals compared to urban areas, continuing the trend from 2019.
- Significant variation in unemployment rates across states persisted, with some states experiencing much higher rates than others.

# Compare 2019 and 2020 Unemployment Rates

## Findings

- The Total Unemployment Rate in 2019 is 4.10K and The Total Unemployment in 2020 is 4.71K. There was an overall increase in unemployment Rate from 2019 to 2020.
- In 2019 There was a Peak in May with a 794 Rate and a Lowest in Dec with a 503 Rate In 2020 There was a Peak in May with a 1,269 Rate and a Lowest in Jan with a 527 Rate
- In 2019 the Urban area was 1.71K (41.82%) and the Rural area was 2.39K (58.17%) In 2020 the Urban area was 2.07K (43.84%) and the Rural area was 2.65K (56.16%). Rural areas had higher unemployment rates in both years, but the gap between urban and rural unemployment slightly widened in 2020.
- In 2019 The Highest state with an unemployment rate was Tripura (794) and The Lowest state with an unemployment rate was Meghalaya (130) In 2020 The Highest state with an unemployment rate was Haryana (371) and The Lowest state with an unemployment rate was Sikkim (63). There was a significant drop in the highest unemployment rates by state from 2019 to 2020, suggesting that while overall unemployment increased, it became more evenly distributed across states.

## Key Insights

- The pandemic caused a noticeable spike in unemployment in April and May 2020, which was not observed in 2019. This spike reflects the economic disruptions due to lockdowns and restrictions.
- Both years show higher unemployment in rural areas, with the gap slightly widening in 2020.
- This suggests that rural areas were more affected by unemployment during the pandemic.
- The highest state-specific unemployment rates were lower in 2020 than in 2019, indicating a more widespread issue rather than concentrated in a few states.

# Conclusion

The comparison between 2019 and 2020 highlights the severe impact of the COVID-19 pandemic on unemployment in India. The overall unemployment rate increased, with rural areas being more affected. The spike in unemployment during April and May 2020 was particularly significant.

THANK

YOU