



LONG-TERMINTERNSHIP



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VISAKHAPATNAM**

Unemployment during covid-19

Introduction:-

The unprecedented challenges triggered significant distributions across various sectors, including employment. As countries implemented lockdowns, travel restrictions, and social distancing to curb the spread of virus, business faced closures, supply chain disruptions, and reduced consumer demand, leading to widespread job losses and increased unemployment rates.

Introduction to the impact of employment:-

Before the Pandemic, many countries were experiencing relatively low unemployment rates and stable economic growth. However, the arrival of covid-19 brought about a sudden and severe economic downturn.

Purpose:-

The purpose of examining unemployment in India during the covid-19 Pandemic is to gain a comprehensive understanding of social economic ramifications of the crisis on one of the world's largest economies. By impact of covid-19 on employment trends, we aim to identify underlying causes, different sectors and demographics, and explore the government interventions in unemployment further. This discussion faced by Indian workers and policy makers while also exploring rebuilding labor market & fostering economic recovery.

Abstract :-

The purpose of evaluate impact of covid-19 lockdown on unemployment rate in India. The study collects data on unemployment rates from CMIE database and divides into three parts. Before lockdown, during lock down, after lockdown. The researcher apply Kruskal-Wallis K samples test to this dataset and conduct a post-hoc analysis using Mann-Whitney significant differences Unemployment Rates between phases

1. Awdhesh Kumar Yadav's story:

- Awdhesh Kumar Yadav, a street bookstore in Mumbai, experienced harsh effects of Pandemic before COVID-19, he earned Rs 700 per day
- When the Pandemic hit, the book store closed down, leave without work or income. he borrowed money and return village and took farming

2. Unemployment crisis in India:

the Pandemic caused India's Job market, affecting various aspects.

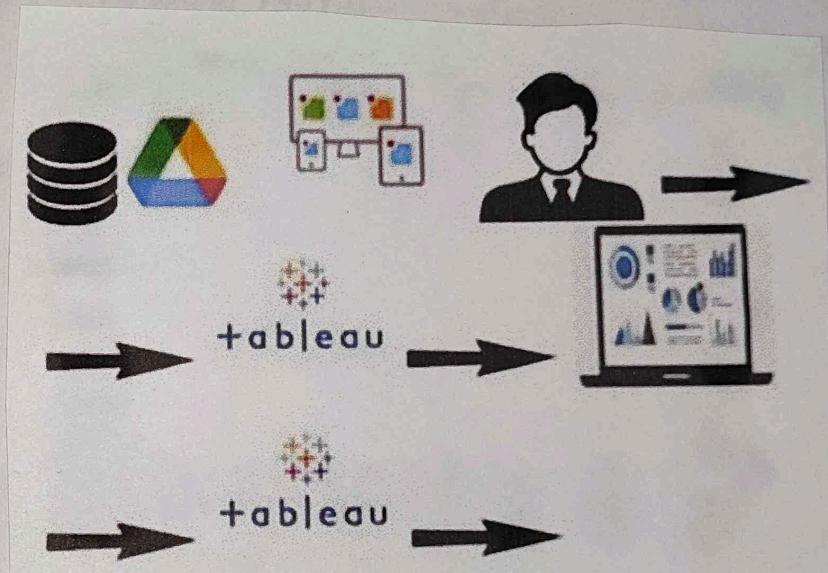
- Rampant unemployment : million lost jobs due to lockdowns.
- Salary cuts : Existing jobs faced salary reduction
- Closure of offices : Many business shut down, job losses
- Diminished economic opportunities : Economic activities to informal workers
- the Periodic Labour force survey revealed 20.9% during April - June 2020, compared 8.9

Problem Statement :

The objective of Project how lockdown affects employment opportunities and how unemployment rate increases during covid-19 . Analyzing dataset get insight of

1. How covid-19 affects the employment
2. How far the unemployment Rate will go

Technical Architecture :



Pre - Requisites :

for completing this project these are some of pre requisites needed

- A system with minimum 4GB RAM and 256GB Hard Disk
- Good internet connection
- Google Drive / Any of Database server Management studio
- MySQL : <https://www.youtube.com/watch?v=2cfU0gZMmY>
- tableau Desktop : <https://www.youtube.com/watch?v=b3PWyYy8HQ08>
- tableau Public account : <https://public.tableau.com/app/discover>

Prior-Knowledge:

To complete this project, one must understand below concept and able to work with tools

- Data visualization : <https://www.youtube.com/watch?v=5gpmhIZz>
- univariate, Bi-variate and Multi-variate Analysis : https://www.youtube.com/watch?v=jG8GRI_MjP3c
- Chart types : <https://www.youtube.com/watch?v=csXMBw8cd0>
- Tableau : <https://www.youtube.com/watch?v=aHaoIVRoos0>
- Business intelligence : <https://www.youtube.com/watch?v=H982BJ1Dc0>

Project Objectives

By the end of Project, you will :

- Able to connect Tableau with different data sources
- Know fundamental concepts and technique used for Data visualization
- Gain a broad understanding about data and different types of charts
- have knowledge on develop visualization, dashboard, story

Project flow

to accomplish, we have to complete all activities, listed below

- Data collection
- Collect dataset or create dataset
- Database sheet connection
- Visualization analysing data
- Develop Dashboard
- Develop storyboard
- Publish tableau public
- Web application integrate
- Develop HTML, CSS using Bootstrap

Data Collection

Data collection is the process of gathering and measuring information variable of interest, establish system fashion enable one to answer stated research questions, test hypotheses, generate insight from data

Activity 1: Downloading the dataset please use link to download dataset

https://www.kaggle.com/code/fatesalbaddawi/unemployment-in-india?script_version_id=143979543&cell_id=6

Working with Dataset:

Activity 1: Understand the Data

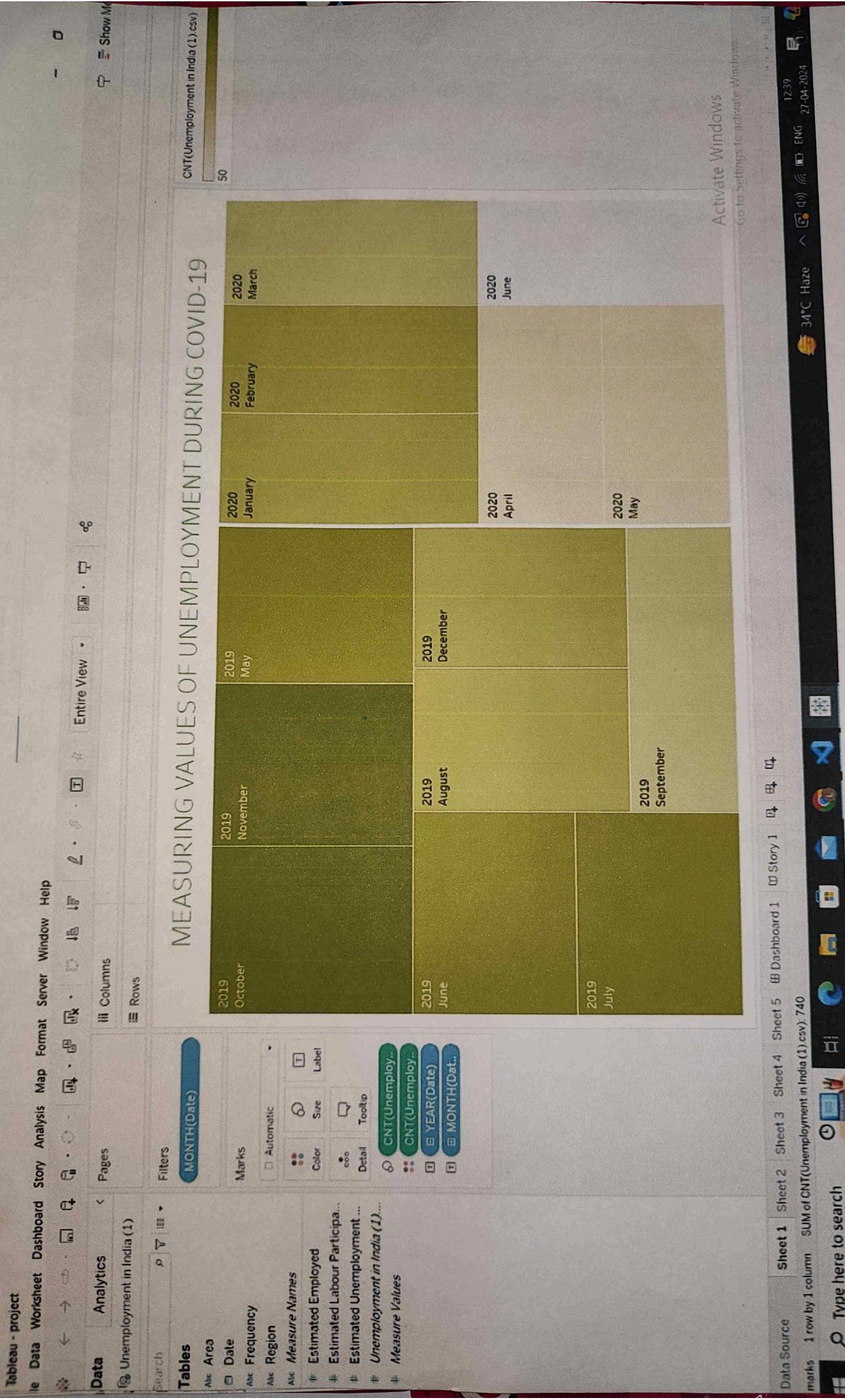
- dataset contains unemployment rate all state India field included
- States = State in India
 - Date = Date Unemploye Rate observed
 - frequency = Measuring frequency
 - estimated employed = number of people employed
 - Area = Rural & Urban Area

Data visualization:

Data visualization is process of creating graphical representation of data and explore information and complex data sets goal of data visualization interpret. By using visual element such as chart, graph, maps, data visualization help people quickly patterns, trends in the data

Activity 1 : employed date across each state analysis:
this graph illustrate unemployment Rate in India
across each state in percentage.

- Measuring values of unemployment during covid-19
- Compare the employment Rate across different States over a specific time Period.
- Present the finding of the analysis using visualizations such as charts, graphs, maps
- use statistical projections and data and trends to make in each states about future employment Rates
- examining the performance of the industries with in each states



Activity 2 : Unemployment Rate in 10 states

this graph illustrate about Unemployment Rate in Top 10 states Bihar has the highest unemployment Rate compared to other states

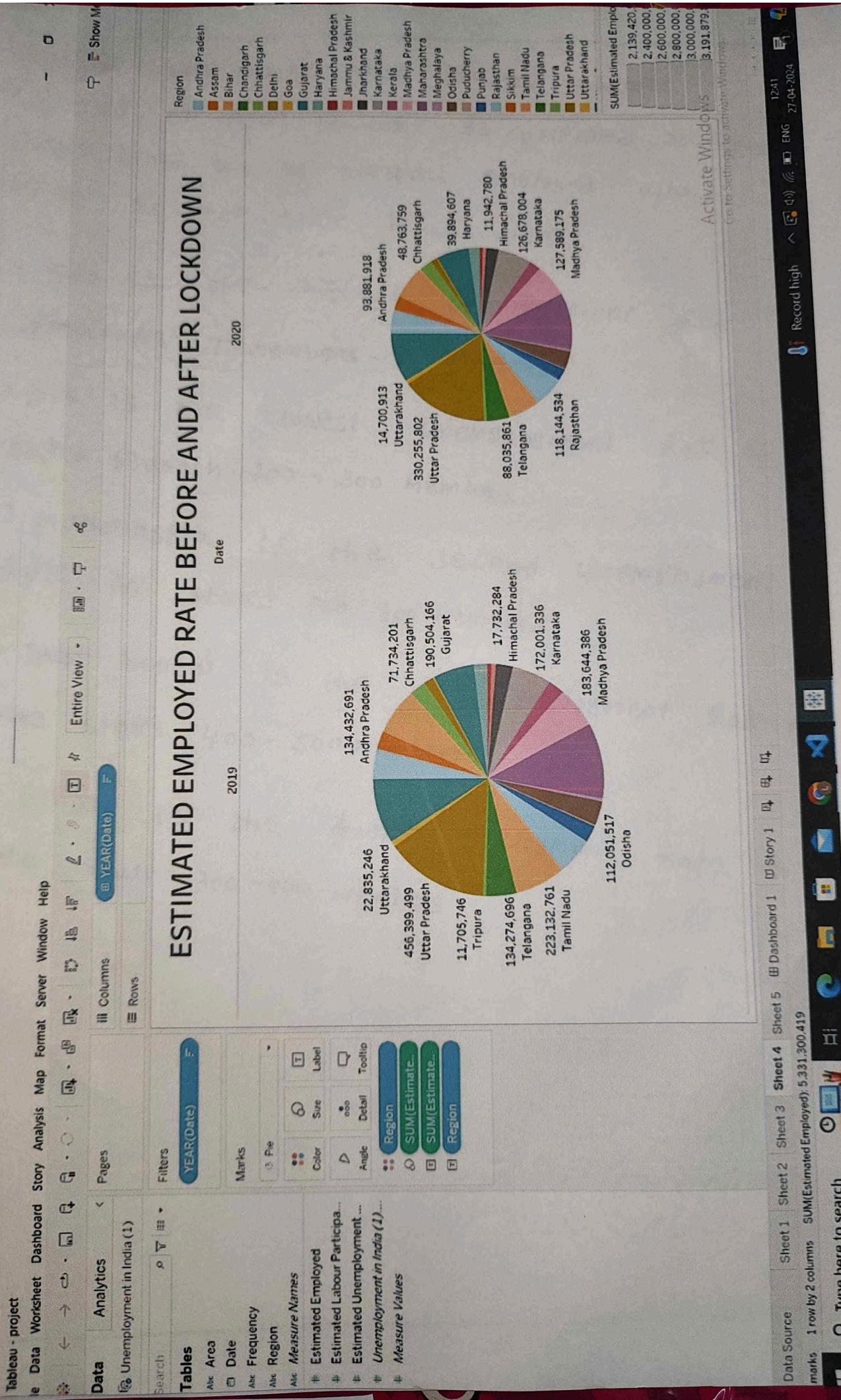
- this is the highest Unemployment Rate in Tripura 800%.
- this is the lowest Unemployment Rate in Punjab 300% to 400%.
- Haryana is the second Unemployment Rate in states 700% to 800%.
- Bihar is one of Most Popular challenges in Rural areas India faces Unemployment 500% to 600%.
- Jharkhand is the third Unemployment Rate in India 500% to 600%.



Activity 3 : Estimated employed Rate before and after lockdown

the pie chart explains about top 10 labour participation by area, in Rural area Maximum labour participate from Tripura state

- estimated employed Rate before and after lockdown Tamil nadu is in 1st place 223,132,761 in 2019.
- the employed Rate in uttarpradesh 2019 - 2020
2019 - uttarpradesh 456,399,499
2020 - uttarpradesh 330,255,802
- the employed Rate in Uttarakhand 2019 - 2020
2019 - Uttarakhand 22,835,246
2020 - Uttarakhand 14,700,913
- the employed Rate in Andhra Pradesh 2019 - 2020
2019 - Andhra Pradesh 134,432,691
2020 - Andhra Pradesh 93,881,918



Activity 4: Employment Rate in top 10 states

estimated employed 10 states as compared to other states Bihar has top estimated employed after lockdown where at least state is Chandigarh

- This is the highest unemployment rate
Uttar Pradesh 700 members - 800 members
- This is the lowest unemployment rate is
Andhra Pradesh 200 - 300 members
- Maharashtra is the second unemployment rate in states 500 - 600 members
- West Bengal is the third employment rate in the states 400 - 500 members
- Bihar is the fourth employment rate in the state 300 - 400 members

Activity 5: Estimated labour participation in Rural and urban area

The graph shows about labour participation in Rural and urban area India during covid-19 we have more labour participate in Rural areas

• Estimated labour participation Rural & urban

Rural area - Meghalaya 800% to 1000%

Urban area - Meghalaya 600% to 800%

• Estimated labour participation Rural & urban in least

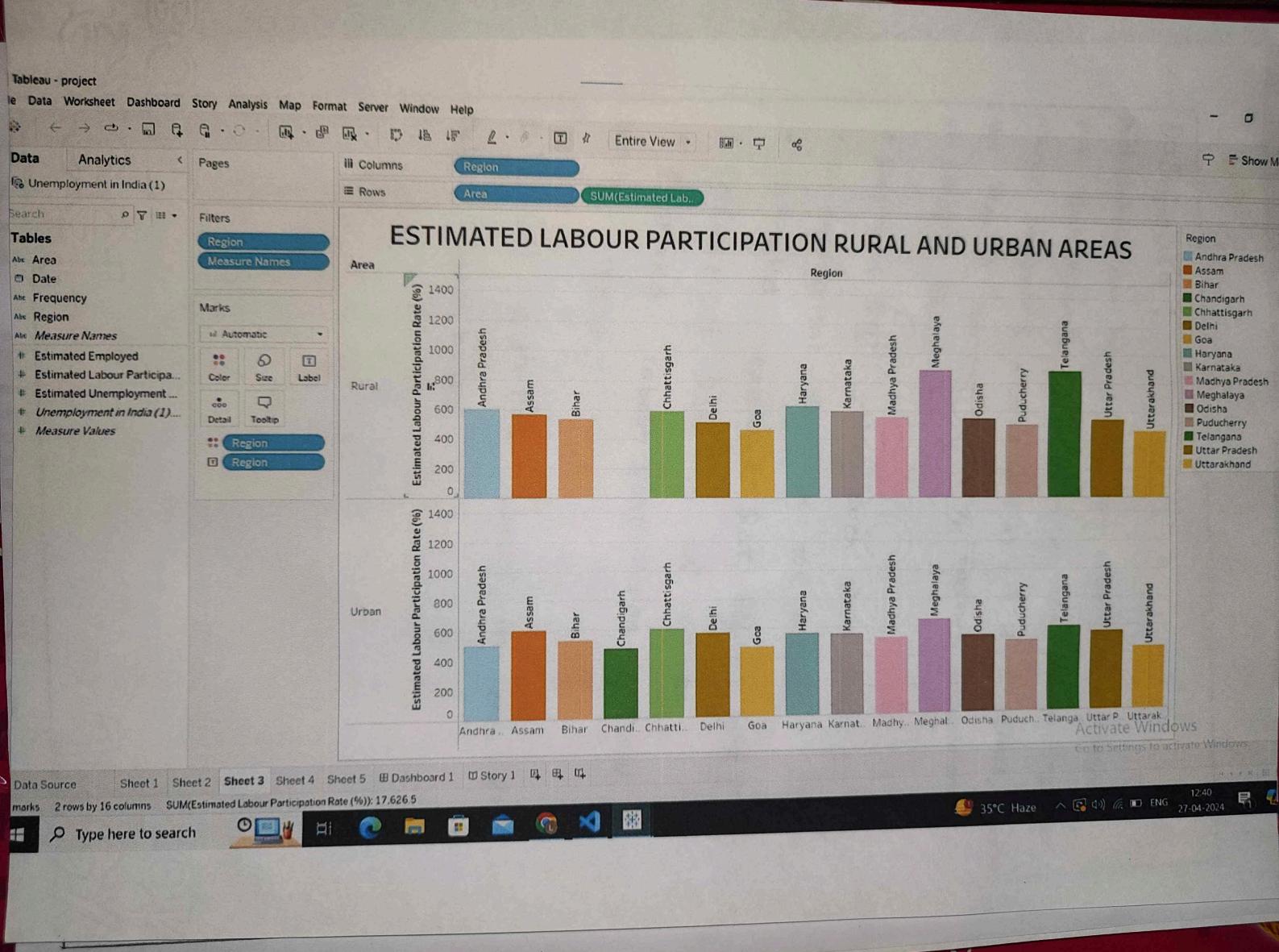
Rural area - Chattisgarh 0%

Urban area - 400% to 600%

• Estimated labour participation Rural & urban in second place.

Rural area - telangana 600% to 800%

Urban area - telangana 400% to 600%



Dashboard :

Dash board can be defined as information management tool that visually tracks, analyses and display key performance indicators, metrics, well as key data points, allowing you monitor current state of business, department, team or specific process.

- Employed Rate across each state analysis
- Unemployment Rate in top 10 states
- Estimated employed Rate before & after lockdown
- Employment Rate in top 10 states
- Estimated labour participation in Rural and urban areas.

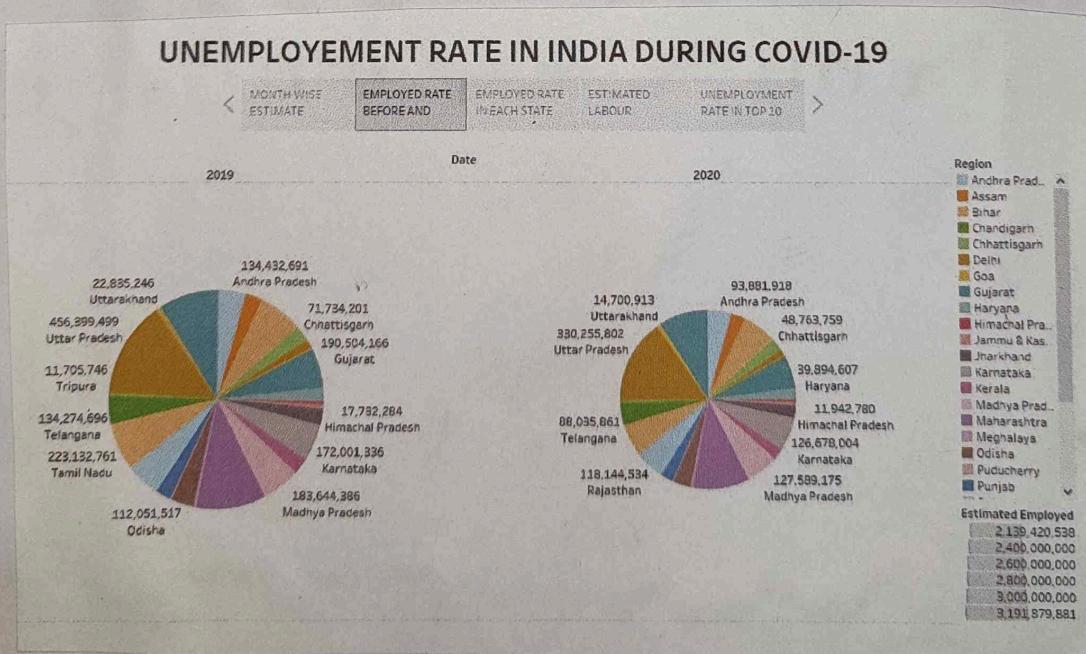
This all activities shown in one page called dash board.

STORY :

A data story is a way of presentation data analysis in narrative format, with goal making information more engaging easier to understand. A data story typically includes a clear introduction that sets stage and explains context for the data, a body that presents data and analysis logical and systematic way, and conclusion summarize key findings and highlight their implications. Data stories can be told using variety of mediums, such as report, presentation, visualizations, videos.

explanation video link:

Story Part:

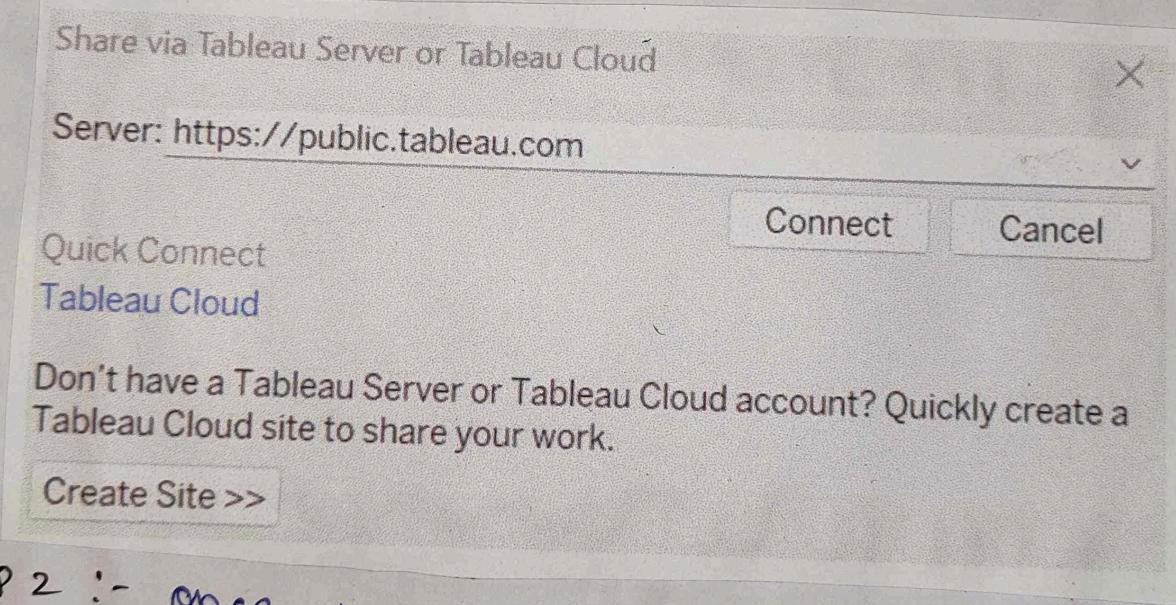


Publishing and web integration

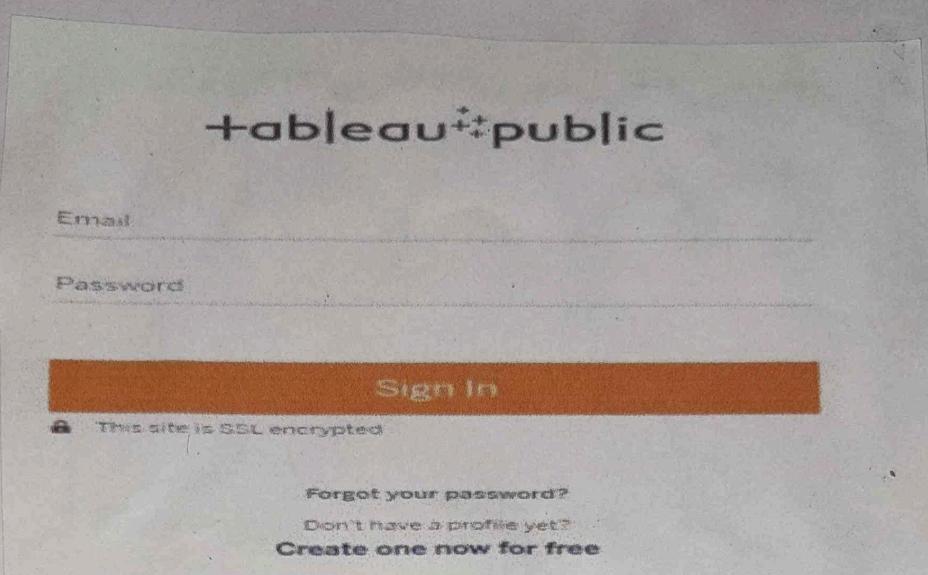
It helps us to track monitor key performance metrics, to communicate results and progress. help a publisher stay informed, make better decisions, and communicate performance to others

Activity 1 : Publishing dashboard and report tableau public

Step 1 : Go to Dashboard, click on share button on the top ribbon give server address of tableau public account and click on connect



Step 2 :- Once you click on connect it will ask you for tableau public user name and password



Once you login into your tableau public using credentials, particular visualization will publish into tableau public

NOTE : While publishing visualization to the public, respective sheet will publish click on share button.

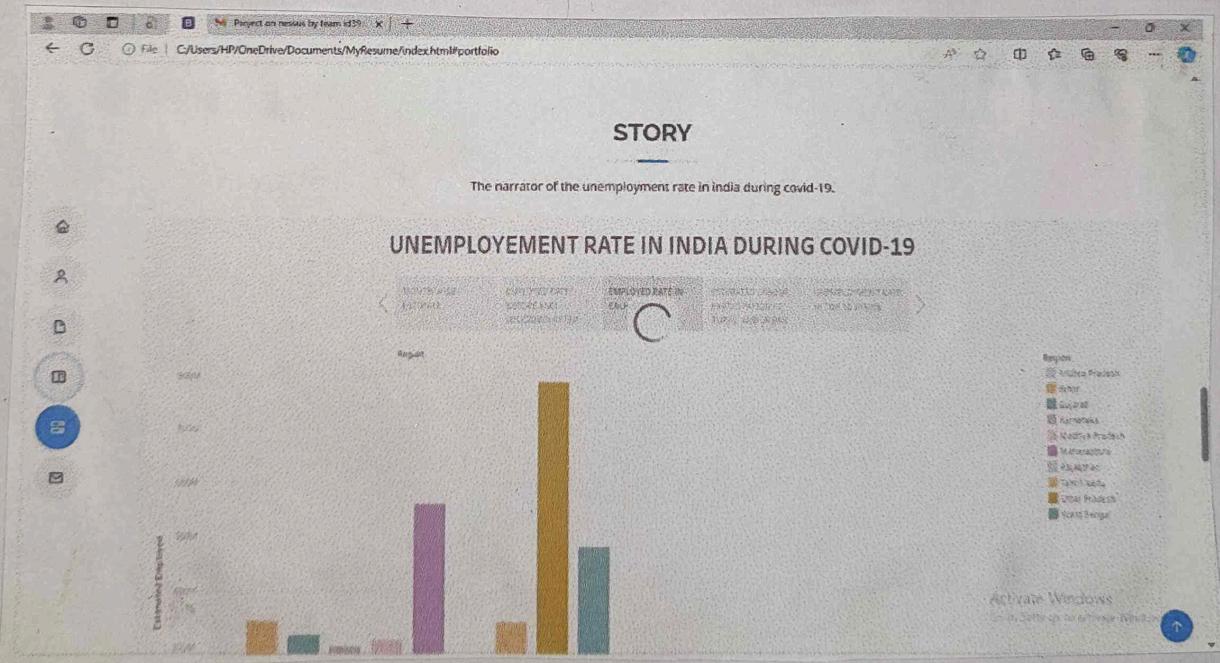
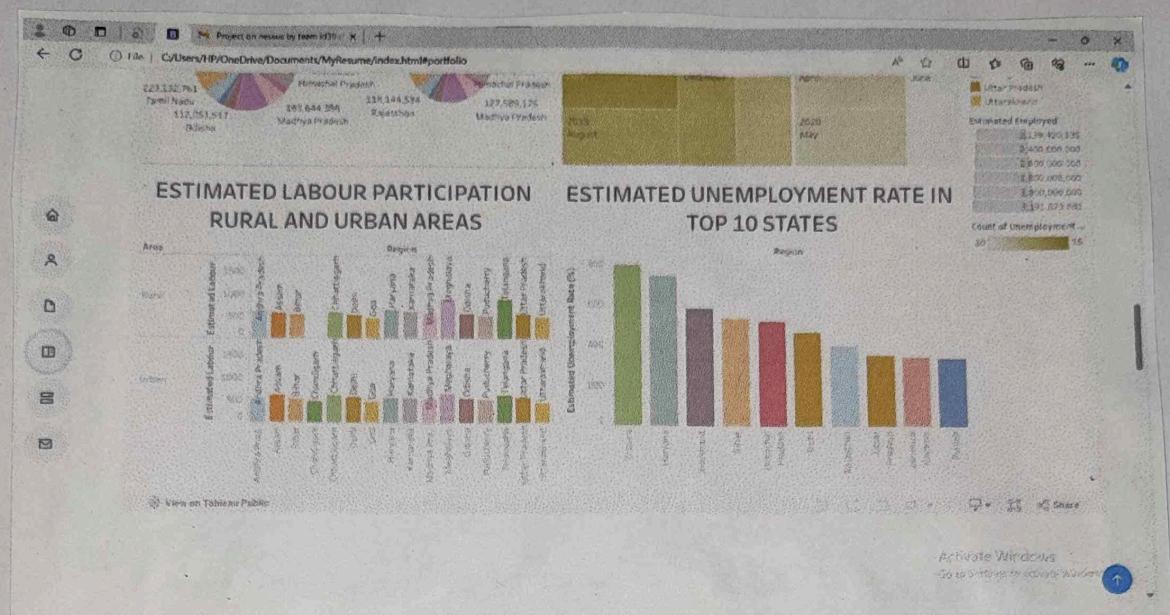
Activity 2 : Integration with Web with embed code

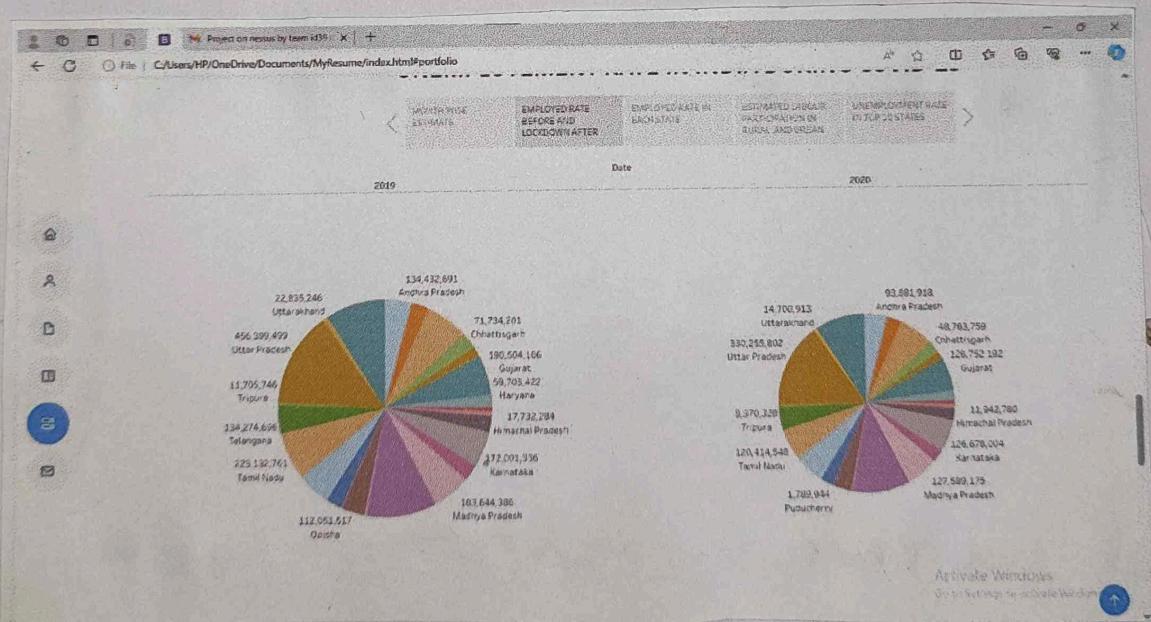
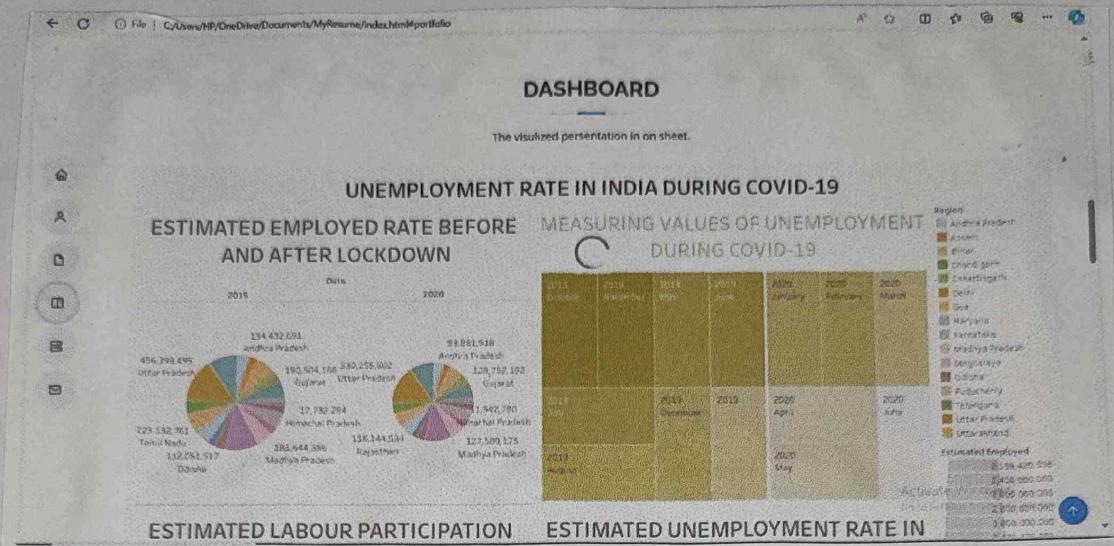
https://drive.google.com/file/d/1F-fKjUgnidfUbOLoANaT58RhfoC7K7c/view?usp=share_link

unemployment rate in india during covid-19

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Proposed solution unemployment of India covid-19

literary solution

It based on the literary survey, follow the steps:

- ① Identify Root causes :- Based on your literature review, pinpoint underlying factors unemployment during covid-19. It could include job losses in specific sectors faced by vulnerable populations.
- ② Explore Policy interventions :- Review implemented by Indian government other stakeholders during covid-19 evaluate effectiveness, identify gaps, potential area of improvement.
- ③ Consider sector-specific measures :- Recognize different sectors require tailored solutions. For ex, measures in hospitality differ from small business or informal sectors.
- ④ Promote Skill Development and Reskilling :- Emphasize importance investing skill development to equip workers by job opportunities. Partnership b/w government, industry, education.
- ⑤ Support Small & Medium Enterprises :- It play a crucial role employment generation provide financial assistance, from impact of Pandemic & Retain create jobs.
- ⑥ enhance social protection! - Advocate for strength unemployed and families during time of crisis. It access benefits, health care, essential services

existing problem : an literacy survey on unemployment during covid-19 follow these steps.

- ① Define your scope : clearly outline objectives & scope of survey during covid-19 Pandemic want to explore impact of different sectors, regions, demographics
- ② Gather Relevant literature : collect academic papers, report, and other sources related unemployment in India during COVID-19 provide causes, effects, solutions to issue
- ③ Organize your literature :- categorize the literature based on themes relevant research questions will help you identify gaps existing literature & further investigation and prioritize areas future investigation
- ④ Analyze and synthesize :- Review literature extract key themes, conflict view point, and areas consensus of unemployment problem in India during covid -19
- ⑤ Evaluate Methodologies : critically evaluate used in literature you've collected . Assess strengths and limitation of data analysis techniques
- ⑥ Identify Gaps and challenges : Highlight any gaps or limitations in existing literature . areas research needed areas unemployment problem in India during covid-19

Theoretical analysis :

block diagram

- ①. Impact of COVID-19 : the Pandemic lead to lockdowns, restrictions, and economic shutdown directly effecting employment across sectors
- ②. Labour Market : It serves foundation. It comprises:
 - supply of labour : individuals seeking employment
 - demand of labour : employers hiring workers
- ③. Government Response:
 - Lockdown measures : implementation of lockdown to curb the spread of virus
 - Economic stimulus package : to mitigate economic impact, funds, loans, welfare schemes
- ④. Sectoral Impact:
 - formal sector : Industry like hospitality, aviation, manufacturing lay offs reduced damaged
 - informal sector : Daily wage workers, street vendors, small-scale entrepreneurs face income loss come to a halt
- ⑤. Technological Displacement : accelerated automation and digitilization Response social distance in certain sectors

- ⑥ Skill mismatch : Distributions job market extractable rendering some workers unemployed short term
- ⑦ Workforce mobility : limited mobility due to containment measures for migrant workers
- ⑧ Psychological impact :- fear of job loss & economic uncertainty affects behaviour & spending business and employment
- ⑨ Government Policies:
- Job creation schemes : implementation schemes aimed generating employment Rural development programs
 - Labour Market Reforms : Policy interventions address structural issue labor market & flexibility
- ⑩ feed back loop : the unemployment feeds back economy affecting consumer confidence decisions, overall economic recovery efforts.

Hardware Design (Tangible Aspects) :

1. labour force participation : - Hardware components represent active labor force participation in economy before Pandemic
2. Economic shutdown : the covid-19 Pandemic acts as a hardware malfunction, causing sudden halt in economic activities due to lockdowns & restrictions
3. Sectoral Impact : Different hardware modules represent various sectors of economy, each experiencing varying degrees of disruption & unemployment
4. Job Losses and Layoffs : this hardware malfunction results in layoffs, furloughs, job losses across industries, disconnected hardware components
5. Migrant labour Displacement : It represents disconnect between hardware component moving back their home states due to job loss in urban areas
6. Supply chain Disruptions : It is due to factory closures and transparent restrictions depicted as broken hardware connections affecting industries reliant on import & exports

Software Design (Intangible Aspects):

- ① Government Policies:- Software Program Symbolize Policies & Interventions designed to address unemployment, such stimulus packages, loan moratoriums, welfare schemes
- ② Digital transformation :- It Represent the transformation accelerated by Pandemic, leading to remote work arrangement and increased reliance on technology for business operations
- ③ Skill development Programs :- It application represent Skill development initiatives & online training program aimed Equipping workers relevant skills for new job opportunities in Post Pandemic economic
- ④ Remote work solutions :- In software platforms symbolize adoption remote work solution & digital platform sustains business operation ensuring employee safety
- ⑤ Job Matching Platforms :- It Represent online recruitment Portals connecting job seekers available opportunities industries experiencing growth during Pandemic
- ⑥ Psychological support system:- It Represent virtual counseling services & mental health support system provide individual facing job & economic uncertainty during Pandemic
- Software designs visualize tangible distribution in Covid-19 Pandemic through hardware &

Advantages of Proposed solution

- ① Public health safety : Reduced workforce participation can contribute social distance of virus healthcare system
- ② Opportunity for Reskilling : unemployed individuals use this time to invest education training acquire new skills for further job opportunities
- ③ family time :- some individuals may have more time to spend with family members due to reduced work hours
- ④ entrepreneurship : unemployment can spur entrepreneurial activities explore self-employment, small business, freelance work
- ⑤ environmental benefits : Reduced industrial activities associate with personalise.

Disadvantage of Proposed solution

- ① financial hardship : - unemployment leads loss of income, financial instability such as housing, food, healthcare expenses
- ② Mental health impact : - job loss and economic uncertainty contribute increased stress among individuals & families
- ③ social isolation : - it can lead social isolation & feelings of loneliness as withdraw from social activities due financial stigma with unemployment
- ④ long-term economic scars : prolonged unemployment can result scarring, skill atrophy, reduce employability, reentering the workforce.
- ⑤ increased inequality : unemployment disproportionately affects vulnerable population low-income workers, minorities, women, social & economic inequality

Application of the areas where this solution can be applied:

During covid-19 pandemic in India felt various sectors & areas

- ① Hospitality & Tourism : with travel restriction lockdown measure the sector faced significant challenges, leading layoffs of hotels, restaurant, tourist
- ② Retail : Non-essential retail business, such as clothes, electronic shops, malls decline in foot traffic result reduced hours of employee & lay offs
- ③ Manufacturing :- Many Manufacturing Industries, automotive, textiles, electronics, affect by supply chain disruption leading layoffs factory closure
- ④ Construction : It were halted or delayed due to labor shortage, supply chain, social distance and workers of contractors
- ⑤ Informal sector : Daily wage workers, vendors, self-employed in this sector faced income loss came to standstill during lockdowns
- ⑥ Transportation : In this sector, including airlines, railways, public transportation, sharp decline in demand, leading layoffs reduce work hours for employee.

Conclusion summarizing the entire work and findings

The COVID-19 Pandemic had a profound impact on unemployment in India, leading to widespread job losses, economic hardship, challenges in labour market, lockdown measures and economic activities such as surge in unemployment rates in various sectors such as hospitality, tourism, construction and informal sector.

Significant reliance on informal sector, comprises a significant portion of India's workforce was due to informal employment in urban areas of economic impact, compared to rural areas.

fiscal stimulus package and employment generation programme, aimed at affected individuals derive economic activity. Ongoing challenges such as skill mismatch, informal employment, structural issue in labour market to impact job market's recovery.

The informal sector, comprises portion of India's workforce daily wages and informal employment arrangement. Urban areas bore brunt economic impact, unemployment rates compared to Rural areas.

Stimulus Programs, activity Structural Markets underscored the critical facilities underscoring the importance of economic & social challenges, require a sustainable recovery. Government interventions, including fiscal package and employment generation aimed at affected individuals to revive economic mismatches, informal employ labour market of job.

Overall, the COVID-19 Pandemic of unemployment as a challenge, require its impact and Recovery.

Enhancements that can be made in the future.

Addressing unemployment during and after COVID-19 Pandemic require multi-faced both short-term, long-term interventions here some future scope help unemployment during COVID-19

- ① Investment in Digital Infrastructure: Expanding access to digital infrastructure high speed internet connectivity and digital platforms remote work, online education, new avenues for employment
- ② Promotion of Remote work: encouraging business adopt remote work can help impact of lockdown and social distance on employment invest remote work and training program of workers
- ③ Skill development and reskilling: investing skills that can help unemploye acquire new skills and demand in Post-Pandemic economy. government funded initiatives public-private & online platforms
- ④ Support for entrepreneurship: Promote entrepreneurship support small business create new job opportunity and economic growth it can help aspiring entrepreneurs launch and grow ventures.

⑤ Green jobs and sustainability: Investing green technologies industries can create new employment opportunities of environmental challenges such as renewable projects, energy-efficient, waste management in emerging sectors.

⑥ Social protection programs: It include unemployment insurance, social assistance, health care coverage, can provide safety net against future economic shocks. Social assistance, can improve growth: fostering inclusive growth, help economic inequality diversity & can reduce access to employment.

⑦ Promotion of inclusive growth: fostering inclusive inclusion can help economic inequality diversity & the population can reduce access to employment opportunities.

⑧ Global collaboration and co-operation: International organization, private sector can facilitate knowledge sharing, technology transfer, and response to global challenges such as unemployment. It can leverage collective expertise resources to address complex issue on global scale.