

Industry Workforce Business Analytics

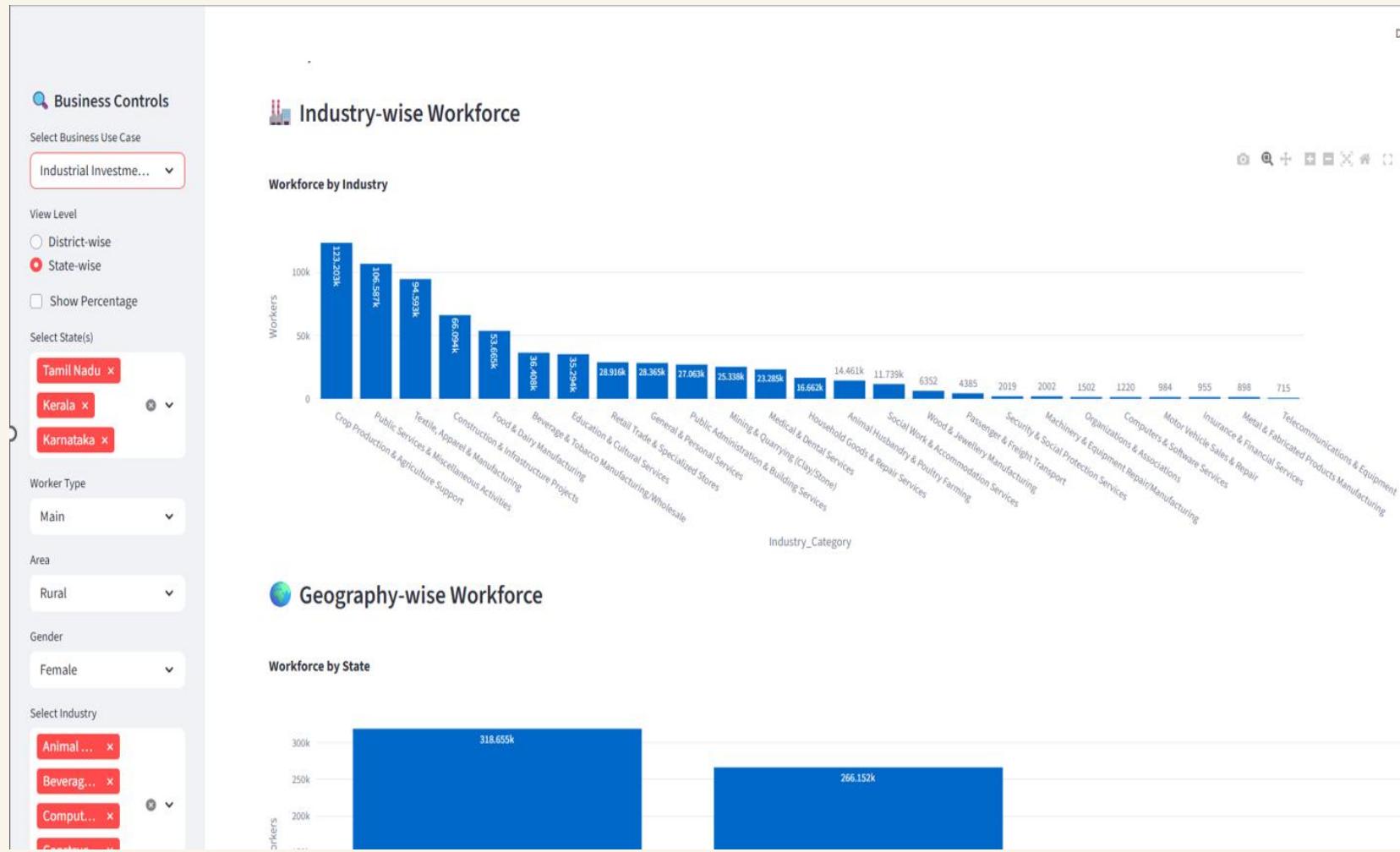
Visual Insights from Streamlit
Dashboard

Presented by Muthu Sailaja



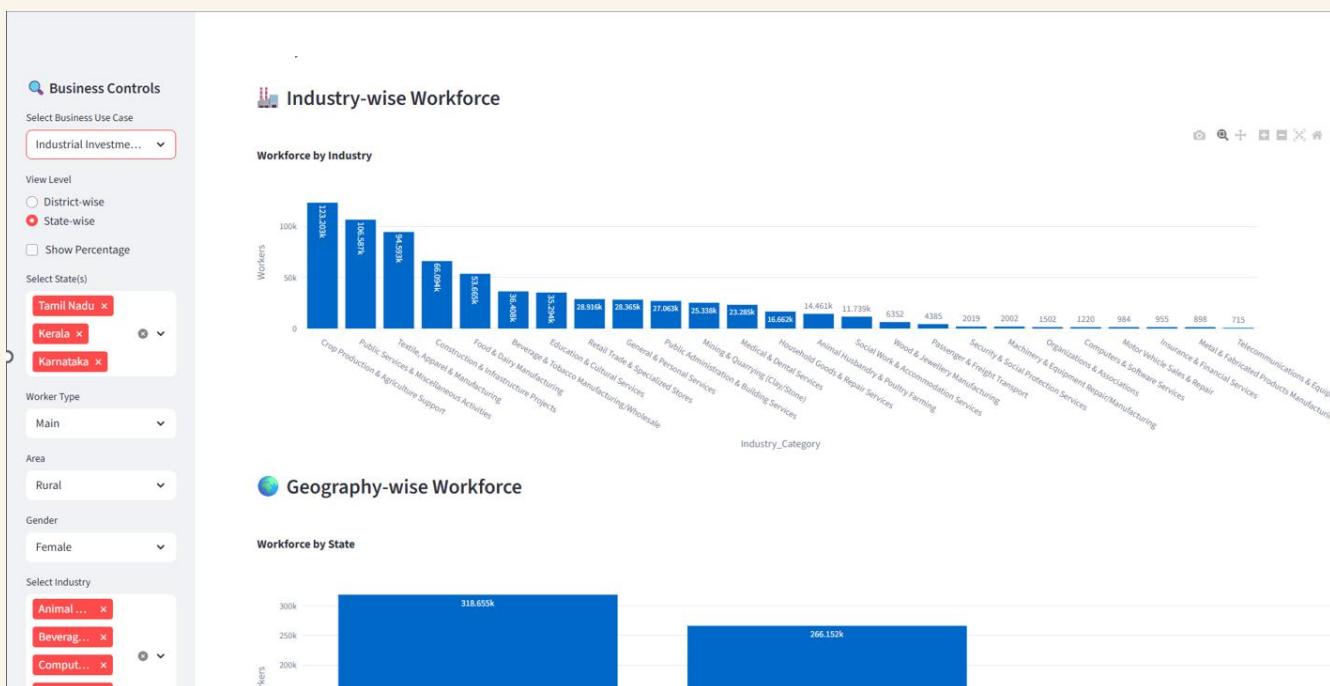
App Overview: Analyzing Workforce Distribution

This Streamlit dashboard provides comprehensive analysis of workforce distribution across various industries and geographies. It's designed to offer critical insights for policy-making and business strategies.





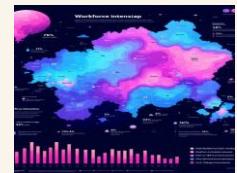
Interactive Controls for Deep Dives



Our interactive filters empower users to drill down into specific data points. Easily refine your analysis by selecting:

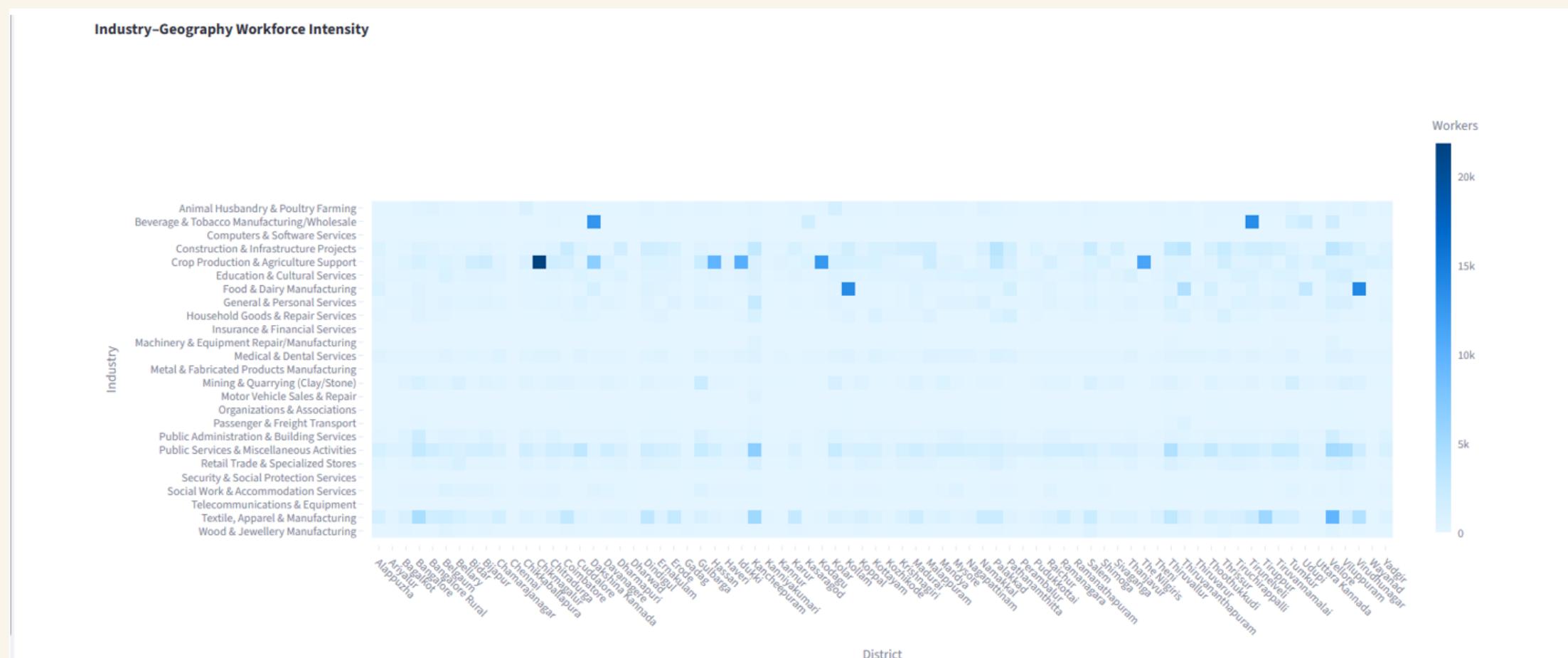
- *Geography (State, District, Area)*
- *Worker Type*
- *Gender*
- *Industry*

This granular control ensures tailored insights for every query.



Industry vs. Geography Heatmap

The heatmap visualization quickly highlights workforce intensity across different industries and geographical regions. Darker areas indicate higher concentrations, revealing key employment hubs and sector dominance.





Key Business Use Cases

Industrial Investment Planning

Identify optimal regions for new industrial investments based on existing workforce data and potential for growth.

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Business Controls

Select Business Use Case
Industrial Investment Planning

View Level
 District-wise
 State-wise
 Show Percentage

Select State(s)
Tamil Nadu
Kerala
Karnataka

Districts with high workforce and low industry saturation are ideal for new industrial investments.

| | District | Total_Workers | Industry_Count | Investment_Score |
|----|----------------|---------------|----------------|------------------|
| 7 | Bidar | 6690 | 25 | 267.6 |
| 39 | Krishnagiri | 6678 | 25 | 267.12 |
| 51 | Ramanagara | 6496 | 25 | 259.84 |
| 18 | Dharmapuri | 6168 | 25 | 246.72 |
| 9 | Chamarajanagar | 6066 | 25 | 242.64 |
| 17 | Davanagere | 5840 | 25 | 233.6 |
| 55 | Sivaganga | 5662 | 25 | 226.48 |
| 56 | Thanjavur | 5654 | 25 | 226.16 |
| 75 | Yadgir | 5572 | 25 | 222.88 |
| 44 | Nagapattinam | 5098 | 25 | 203.92 |

Main

Download Filtered Data

Area



Key Business Use Cases

Skill Gap Analysis

Assess the diversity of the workforce versus industry demands to pinpoint critical skill shortages.

Select State(s)

Tamil Nadu x

Karnataka x

Kerala x

Select District(s)

Alappuzha x

Ariyalur x

Bagalkot x

Bangalore x

Worker Type

Main

Area

Rural

Gender

Female

Skill Gap Analysis

| | District | Industry_Category | Count |
|----|-----------|--|-------|
| 21 | Alappuzha | SOCIAL WORK & ACCOMMODATION SERVICES | 106 |
| 22 | Alappuzha | TELECOMMUNICATIONS & EQUIPMENT | 20 |
| 23 | Alappuzha | TEXTILE, APPAREL & MANUFACTURING | 1352 |
| 24 | Alappuzha | WOOD & JEWELLERY MANUFACTURING | 24 |
| 25 | Ariyalur | ANIMAL HUSBANDRY & POULTRY FARMING | 72 |
| 26 | Ariyalur | BEVERAGE & TOBACCO MANUFACTURING/WHOLESALE | 0 |
| 27 | Ariyalur | COMPUTERS & SOFTWARE SERVICES | 8 |
| 28 | Ariyalur | CONSTRUCTION & INFRASTRUCTURE PROJECTS | 84 |
| 29 | Ariyalur | CROP PRODUCTION & AGRICULTURE SUPPORT | 42 |
| 30 | Ariyalur | EDUCATION & CULTURAL SERVICES | 234 |
| 31 | Ariyalur | FOOD & DAIRY MANUFACTURING | 26 |

High workforce but limited industry diversity indicates the need for skill development programs.

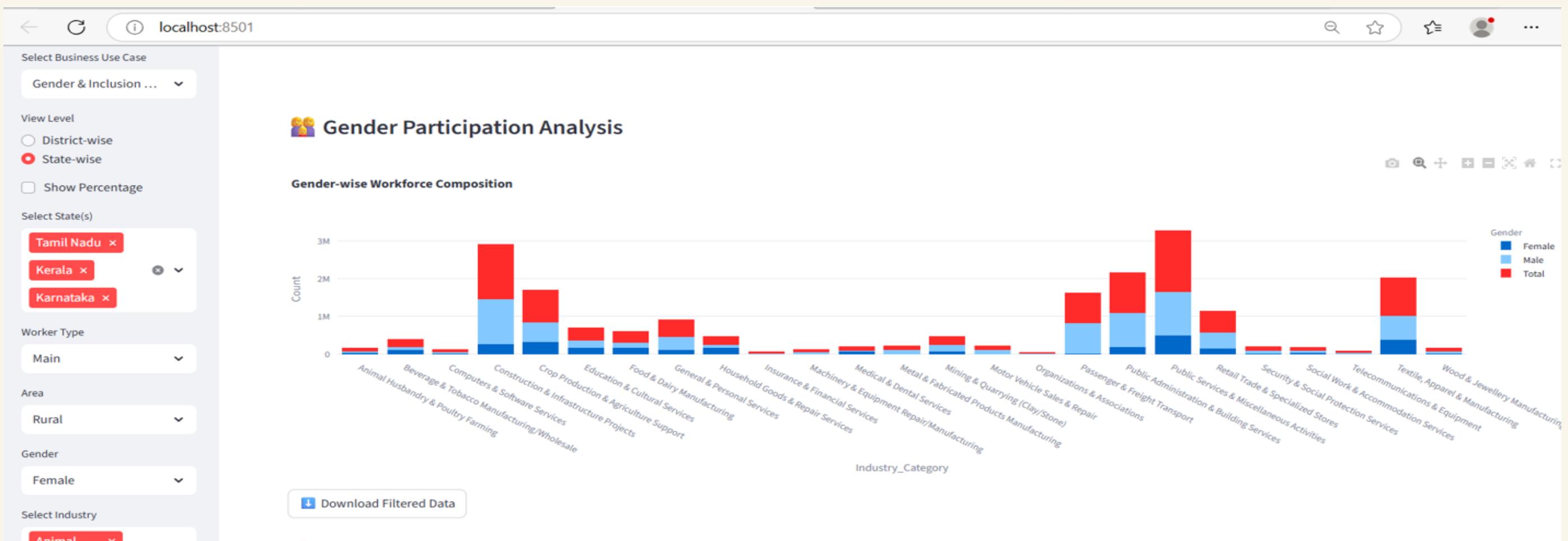
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Key Business Use Cases

Workforce & Industry Diversity

Analyze the distribution of the workforce across various industries to understand sector-specific employment trends and identify areas for diversification or specialization.





Key Business Use Cases

Industry Dependency Risk Assessment

Evaluate the risk of over-reliance on single industries within specific regions. This table helps in strategizing for economic resilience and diversification.

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Select Business Use Case
Industry Dependen... | ▾

View Level
 District-wise
 State-wise
 Show Percentage

Select State(s)
Tamil Nadu x
Kerala x
Karnataka x

Worker Type
Main

Area
Rural

Gender
Female

State

Deploy

⚠ Industry Dependency Risk

| | District | Industry_Category | Count | Share |
|------|--------------|---------------------------------------|-------|--------|
| 304 | Chikmagalur | Crop Production & Agriculture Support | 21864 | 0.8513 |
| 629 | Hassan | Crop Production & Agriculture Support | 9618 | 0.6514 |
| 679 | Idukki | Crop Production & Agriculture Support | 10310 | 0.7278 |
| 829 | Kodagu | Crop Production & Agriculture Support | 12582 | 0.8692 |
| 881 | Kollam | Food & Dairy Manufacturing | 13838 | 0.6411 |
| 1429 | The Nilgiris | Crop Production & Agriculture Support | 11366 | 0.8781 |

Districts heavily dependent on a single industry are economically vulnerable.

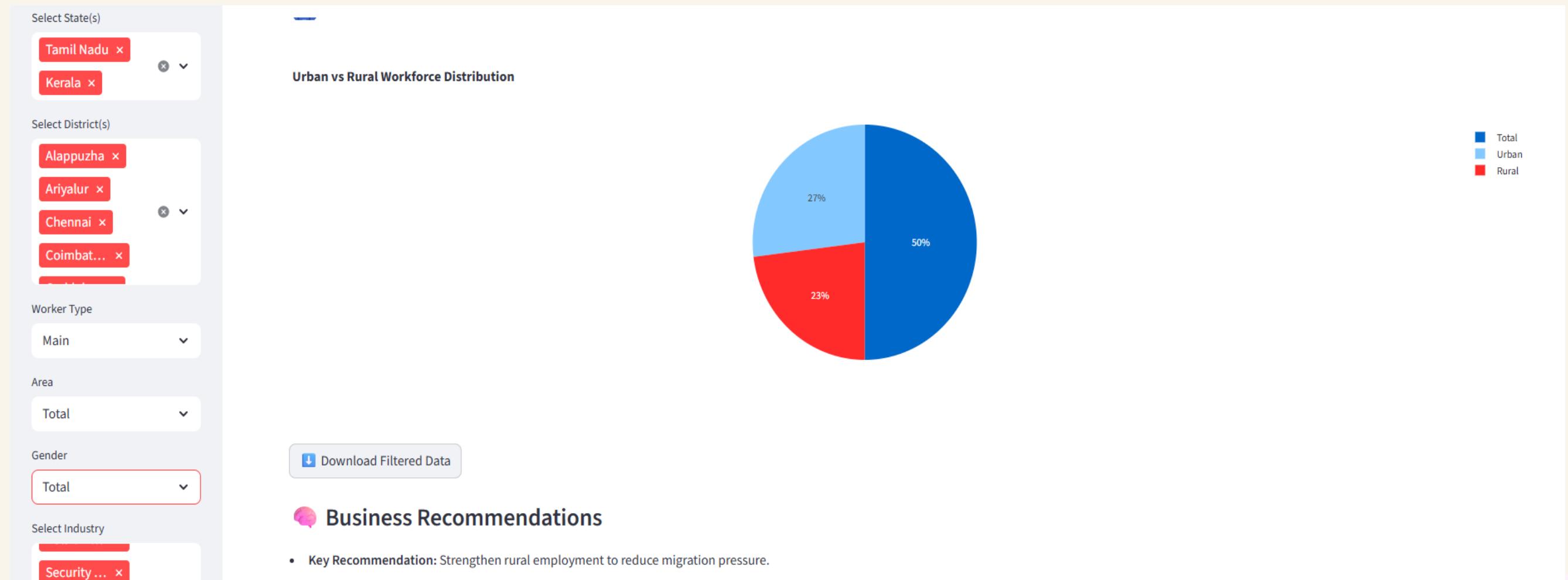
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Key Business Use Cases

Urbanization & Migration Patterns

This pie chart illustrates the impact of urbanization and migration on workforce distribution, offering insights into population shifts and their effects on regional labor markets.





Business Recommendations

→ Promote Industries

Focus on industries in high-workforce, low-saturation districts to maximize growth.

→ Skill Development

Launch targeted skill development programs to address identified gaps in the workforce.

→ Improve Female Participation

Implement initiatives to enhance female workforce participation across all sectors.

→ Encourage Diversification

Foster industry diversification to mitigate dependency risks and build economic resilience.

→ Strengthen Rural Employment

Develop strategies to boost employment opportunities in rural areas, reducing urban migration pressure.