

# Labor Insight Dashboard

## Problem Statement:

Create an interactive Excel dashboard to analyze labor statistics from 2017 to 2020. The dashboard should allow high school seniors to explore wage and employment trends across various industries and states. It should also include a map feature to visualize state-by-state differences in employment and wage data, enabling comparisons and insights into regional variations.

## Dataset Summary:

US labor statistics by industry & state, from 2017 to 2020

	A	B	C	D	E	F
1	Year	Industry	State	Establishments	Employees	Avg Annual Wage
2	2020	Natural Resources	Alabama	1,829	18,051	\$58,872
3	2020	Natural Resources	Arizona	1,354	35,607	\$55,216
4	2020	Natural Resources	Arkansas	2,565	15,961	\$49,909
5	2020	Natural Resources	California	17,651	4,25,665	\$42,534
6	2020	Natural Resources	Colorado	3,312	41,633	\$91,879
7	2020	Natural Resources	Connecticut	467	5,260	\$43,142
8	2020	Natural Resources	Delaware	186	1,317	\$43,290
9	2020	Natural Resources	Florida	5,394	71,107	\$37,717
10	2020	Natural Resources	Georgia	2,794	29,309	\$45,978
11	2020	Natural Resources	Idaho	2,531	27,020	\$42,820
12	2020	Natural Resources	Illinois	2,818	24,933	\$52,259
13	2020	Natural Resources	Indiana	2,302	20,872	\$50,732
14	2020	Natural Resources	Iowa	2,911	22,868	\$45,588
15	2020	Natural Resources	Kansas	2,613	18,607	\$47,721
16	2020	Natural Resources	Kentucky	1,632	16,061	\$54,605
17	2020	Natural Resources	Louisiana	3,143	37,751	\$86,727
18	2020	Natural Resources	Maine	1,581	7,787	\$41,422
19	2020	Natural Resources	Maryland	720	7,112	\$46,887
20	2020	Natural Resources	Massachusetts	999	11,134	\$64,628
21	2020	Natural Resources	Michigan	3,574	34,897	\$43,309
22	2020	Natural Resources	Minnesota	3,175	28,204	\$51,276
23	2020	Natural Resources	Mississippi	2,070	14,561	\$50,525
24	2020	Natural Resources	Missouri	2,123	16,963	\$46,677
25	2020	Natural Resources	Montana	1,847	12,449	\$65,945
26	2020	Natural Resources	Nebraska	2,469	16,054	\$44,449
27	2020	Natural Resources	Nevada	598	19,509	\$88,060
28	2020	Natural Resources	New Hampshire	350	2,671	\$48,051
29	2020	Natural Resources	New Jersey	999	11,868	\$44,634

## Dimensions & Measures:

- Dimensions: Year, Industry, State
- Measures: Establishments, Employees, Avg Annual Wage

## Excel Concepts Covered:

- Statistical & Lookup Formulas
- Inserting & Formatting Custom Charts
- Dynamically Highlighting Series
- Creating New Data with Data Types
- Adding Form Controls
- Protecting Workbooks & Worksheets

## Key Points:

- **Average Wage Calculation (2020):** Calculated the average wage for each industry in 2020 using criteria from the data and date filters, visualized through a bar chart to compare wages across industries.
- **Donut Chart for Industry Representation:** Showed the compensation of the job market by calculating the total number of employees by industry, and represented it using a grouped donut chart.
- **Wage and Employee Trends by Year:** Used a line chart to compare wage and employee trends over time, with column charts highlighting volume differences.
- **Map Visualization by State:** Created a map to compare employees per capita by state, with functionality to switch between wage and employee views.

This approach ensured a comprehensive and easy-to-understand visualization of labor market trends, making the data accessible for high school seniors planning their future careers.

## Dashboard Insights:

The dashboard provides a detailed analysis of labor statistics across industries and states. The insights will vary depending on the industry selected. For the Information industry, as shown in this specific screenshot, the average wage in 2020 was \$94,000. Additionally, the industry's share of total employment is represented as 2%, as visualized in the donut chart.

When looking at wage and employee trends over time, the data reveals a steady increase in wages, with the following annual figures:

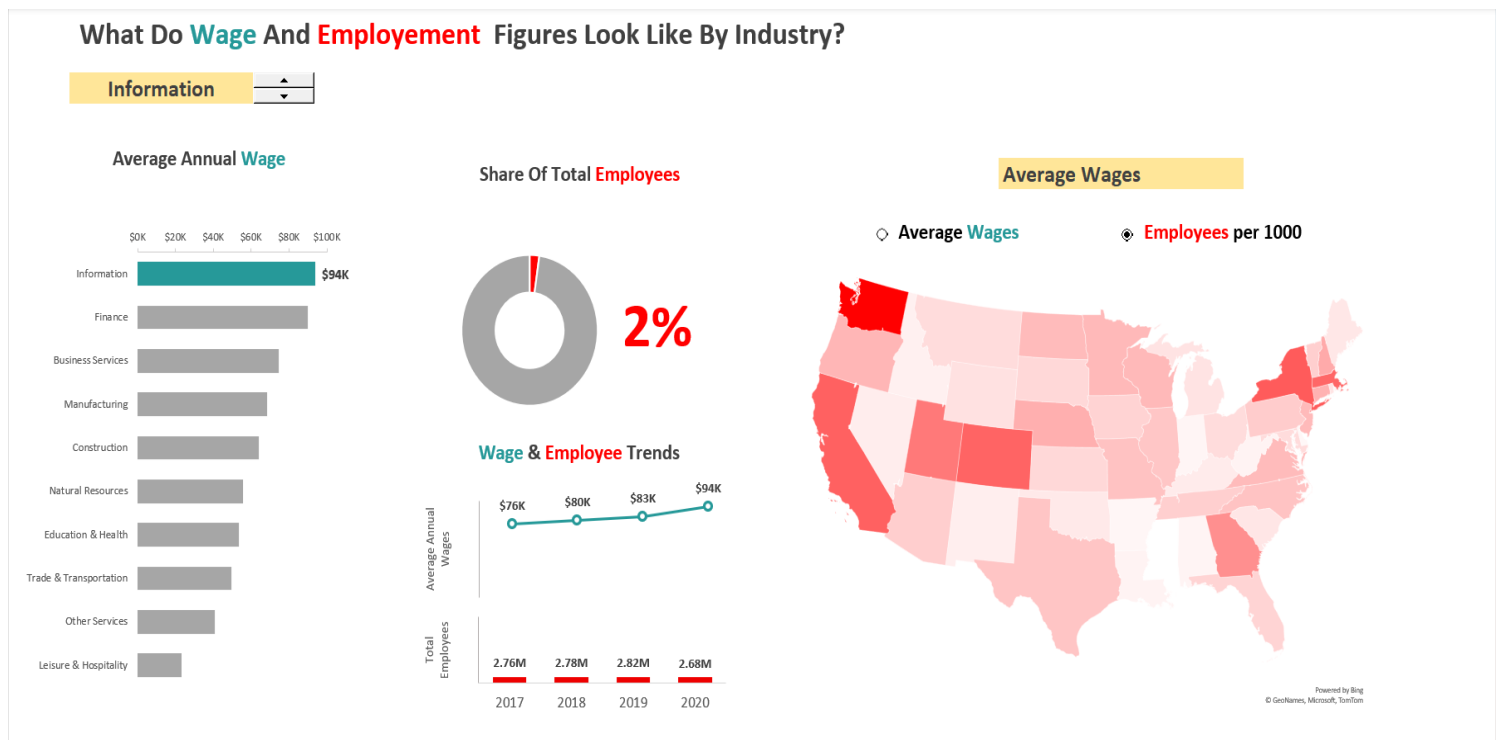
- 2017: \$76,000
- 2018: \$80,000
- 2019: \$83,000
- 2020: \$94,000

In terms of employment, the Information industry saw the following changes in total employees:

- 2017: 2.76 million
- 2018: 2.78 million
- 2019: 2.82 million
- 2020: 2.68 million

The map visualization indicates that Washington has the highest employee per capita in this industry, with a value of 20. Additionally, Washington and California stand out for having the highest average wages, with figures of \$242,273 and \$271,892, respectively.

This screenshot specifically highlights the Information industry, but the dashboard is dynamic and will adjust according to the selected industry.



Similarly, we have the Dashboard for the Finance Industry:

