Employees Salaries

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Content

Introduction

Employee salaries over the past three years. Examined salary trends and workforce composition in our company to understand how we can better attract and retain top talent. Our goal is to provide insights that help guide strategic decisions in hiring, compensation, and workforce management.

Tech Innovators faced a significant challenge despite their rapid growth, they struggled to retain their top talent, especially in critical data-related roles. High turnover rates were affecting project timelines and overall company performance.

Tech Innovators needed to understand the following:
- How competitive were their salaries compared to industry standards?
- Which job roles were the most valuable and required better compensation packages?
- How different employment types (full-time, part-time, contract, freelance) affected their salary structure.
- The impact of experience levels on salary distribution and retention rates.
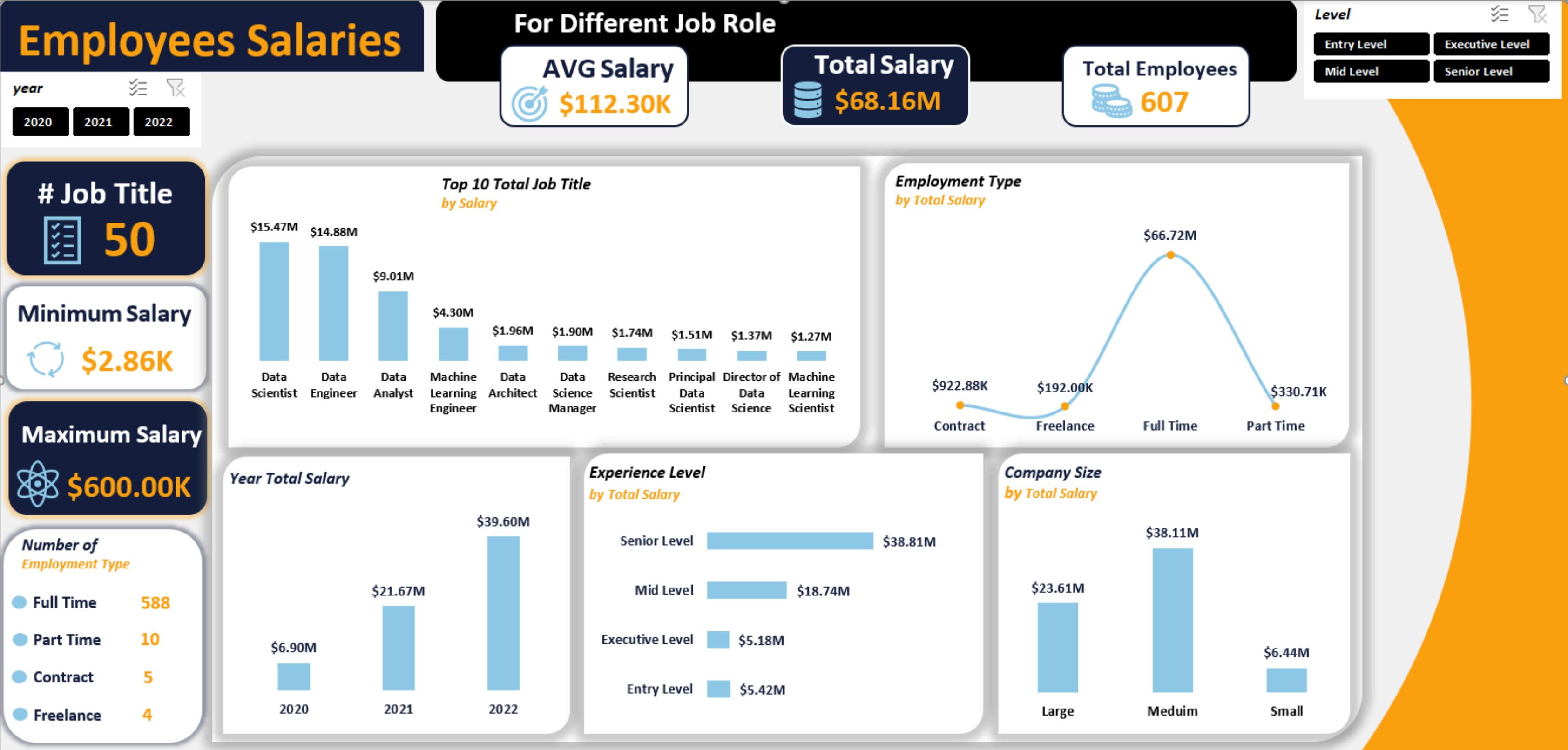- How the size of the company influenced total salary expenditure.

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 Employee salaries over the past three years

work_year	Experience_level	employment_type	job_title	salary	salary_currency	salary_in_usd	employee_residenc	remote_ratio	company_location	compay_size
2020	Mid Level	Full Time	Data Scientist	70000	EUR	79833	DE	0	DE	Large
2020	Senior Level	Full Time	Machine Learning Scientist	260000	USD	260000	JP	0	JP	Small
2020	Senior Level	Full Time	Big Data Engineer	85000	GBP	109024	GB	50	GB	Meduim
2020	Mid Level	Full Time	Product Data Analyst	20000	USD	20000	HN	0	HN	Small
2020	Senior Level	Full Time	Machine Learning Engineer	150000	USD	150000	US	50	US	Large

Data Preprocessing

- Data Cleaning: Checked for and handled missing values in all Columns to ensure data completeness.

- Data Type Conversion: Ensured all columns were in the correct data type format (dates, numeric, categorical) for accurate analysis.

- DAX Calculations: Set up necessary calculated columns and measures for detailed insights

Dashboard Overview Findings and Key Insights

Findings

- The average salary across all job roles is $112.30K. This gives a good idea of the typical salary employees earn in various job roles.
- The total salary paid to employees over the three years is $68.16M. This shows the overall investment in salaries by companies.
- There are 50 unique job titles. This indicates a diverse range of job roles. Companies are hiring for many different positions.
- The lowest salary is $2.86K, and the highest salary is $600K. This wide range highlights the salary disparity, likely due to differences in job roles, experience levels, and company sizes.
- Data Scientist and Data Engineer roles have the highest total salaries, with $15.47M and $14.88M respectively. These roles are in high demand and command high salaries.
- Full-time employees receive the highest total salaries, amounting to $66.72M. Full-time positions are the most common and offer stability, which is why they have the highest total salary.
- Total salaries increased significantly from $6.90M in 2020 to $39.60M in 2022. This rise might be due to company growth, increased hiring, or salary raises over the years.
- Senior-level positions have the highest total salaries, at $38.81M. Senior roles require more experience and skills, leading to higher salaries.
- Medium-sized companies have the highest total salaries, with $38.11M. Medium-sized companies may be growing rapidly and investing more in competitive salaries to attract talent.
- Full-time positions dominate, with 588 out of 607 employees. Full-time roles are preferred for their stability and benefits, reflecting a common employment practice.

Key Insights

- The high total salaries for Data Scientist and Data Engineer roles reflect the industry's need for professionals who can manage and analyze large datasets to drive business decisions.
- Senior-level professionals earn more, which aligns with industry norms where experienced individuals are compensated for their expertise and ability to handle complex tasks.
- The full-time roles show that companies prefer stable, long-term employment relationships to ensure consistent performance and employee loyalty.
- The increasing yearly total salaries suggest that companies are expanding their workforce and possibly their revenue, enabling them to offer higher salaries and hire more employees.

2020 Employees Salaries Dashboard

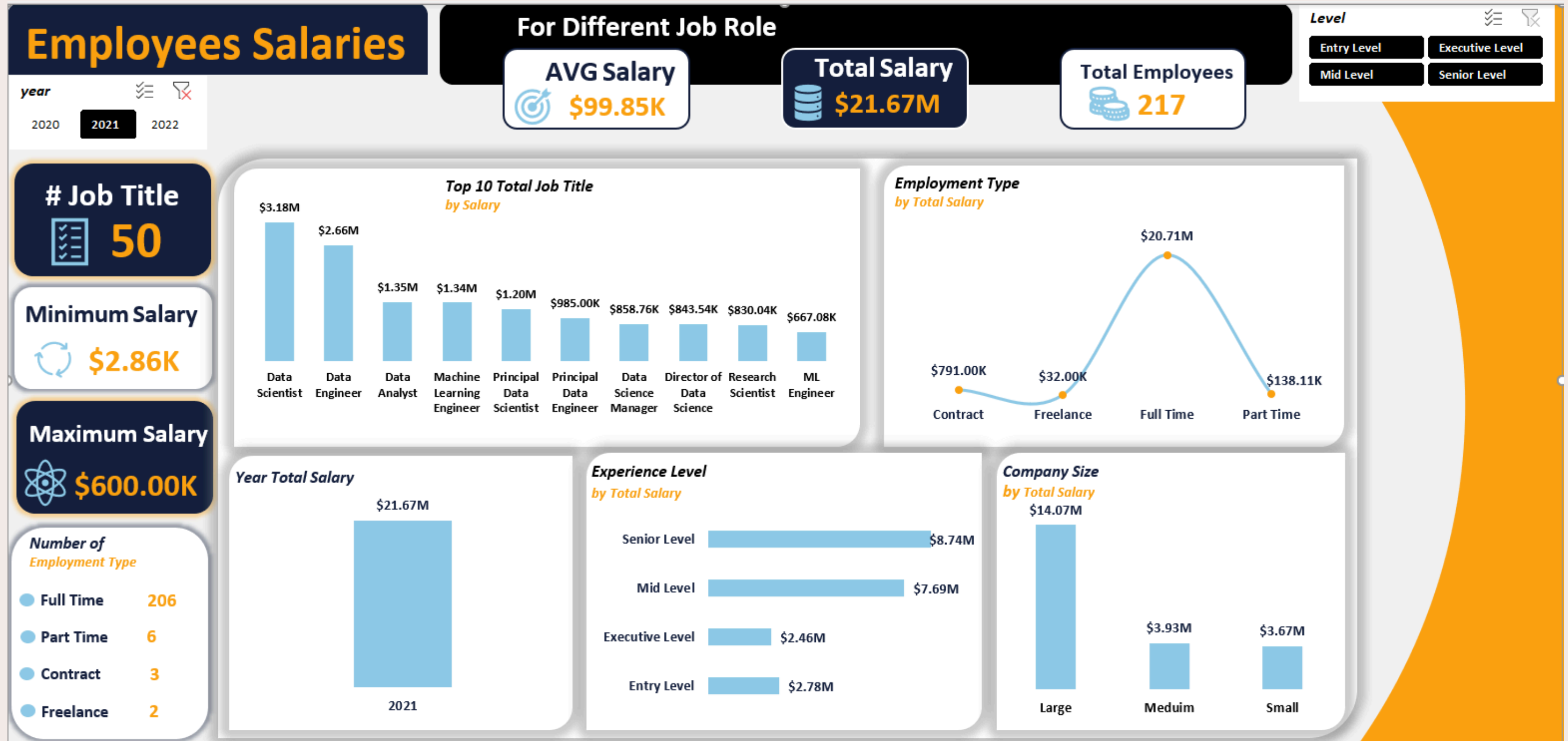# 2020 Employees Salaries Findings and Key Insights

Findings

- The average salary in 2020 is $95.81K. This shows the typical pay for employees in various roles during 2020.
- The total salary paid in 2020 is $6.90M. This indicates the total amount companies spent on salaries in 2020.
- There are 72 employees in 2020. This shows the number of employees whose salary data is included for that year.
- The lowest salary is $5.71K, and the highest salary is $450K. This highlights the range of salaries in 2020, which can vary greatly depending on job role and experience.
- Data Scientist roles have the highest total salary at $1.81M, followed by Data Engineer with $969.78K. Data-related roles are highly valued.
- Full-time employees receive the highest total salary at $6.70M. Full-time roles are the most common and provide stability.
- Total salary for 2020 is $6.90M. This shows the salary expenditure for the year and sets a baseline for comparison with other years.
- Senior-level positions have the highest total salary at $2.47M, followed by Mid-level at $2.75M. More experienced employees earn higher salaries.
- Large companies have the highest total salary at $3.51M. Large companies typically have more employees and higher budgets, resulting in higher total salaries.
- The majority of employees are in full-time positions (68 out of 72). Full-time roles are preferred for their stability and benefits.

Key Insights

- High total salaries for Data Scientist and Data Engineer roles indicate a strong demand for professionals who can handle and analyze data to drive business outcomes.
- Senior and mid-level roles earning the highest salaries align with the industry norm that more experienced individuals are compensated for their expertise and ability to take on complex tasks.
- The full-time roles show a preference for stable, long-term employment, which benefits both employees and employers through job security and consistent performance.
- Larger companies having higher total salaries suggest that they are more likely to invest in a bigger and potentially more skilled workforce.

2O21 Employees Salaries Dashboard

2021 Employees Salaries Findings and Key Insights

Findings

- The average salary in 2021 is $99.85K. This shows that employees earned nearly $100K on average in 2021.
- The total salary paid in 2021 is $21.67M. This indicates a significant increase in total salary expenditure compared to 2020.
- There are 217 employees in 2021. The number of employees more than tripled from 2020.
- The lowest salary is $2.86K, and the highest salary is $600K. The range of salaries has widened, with the maximum salary significantly higher than the previous year.
- Data Scientist roles have the highest total salary at $3.18M, followed by Data Engineer with $2.66M. Data-related roles continue to dominate in terms of total salary.
- Full-time employees receive the highest total salary at $20.71M. Full-time roles remain the most common and lucrative, providing stability and benefits to employees.
- Total salary for 2021 is $21.67M. This reflects a substantial increase in total salary expenditure.
- Senior-level positions have the highest total salary at $8.74M, followed by Mid-level at $7.69M. Experienced employees continue to earn more.
- Large companies have the highest total salary at $14.07M. Larger companies have more employees and higher salary budgets.
- The majority of employees are in full-time positions (206 out of 217). Full-time roles are preferred, providing stable employment and benefits.

Key Insights

- The high total salaries for Data Scientist and Data Engineer roles reinforce the ongoing demand for data professionals. This aligns with the industry trend where data is increasingly critical for decision-making and innovation.
- Senior and mid-level roles continue to command higher total salaries, reflecting their value in leadership, expertise, and experience.
- The full-time role shows that companies prefer to hire employees in stable, long-term positions, which benefits organizational stability and employee satisfaction.
- Larger companies having the highest total salaries make sense as they have the resources to hire more employees and pay competitive salaries to attract top talent.

2022 Employees Salaries Findings and Key Insights

Findings

- The average salary is $124.52K. This shows a pay rise, meaning companies are offering better salaries compared to previous years.
- Total salary is $39.60M, and there are 318 employees. This reflects a big increase in total salary spending and a larger workforce.
- Data roles are highly valued and well-paid, showing their importance in the industry.
- Full-time roles dominate with 314 out of 318 employees. Most employees are full-time, and these roles have the highest total salaries.
- Senior employees earn the most, showing that companies value experience and are willing to pay more for seasoned professionals.
- Medium-sized companies spend the most on salaries, indicating they are growing fast and investing heavily in their employees.

Key Insights

- High salaries for data roles show their high demand and value.
- The full-time role suggests companies want stable, long-term employees who are crucial to operations.
- Higher pay for senior roles reflects the value of experience and expertise. Companies invest more in experienced professionals to lead projects and add significant value.
- Medium-sized companies paying the highest total salaries suggest they are in a growth phase and investing heavily in talent.

Compare 2020, 2021 and 2022 Employee salaries

Findings

- The average salary has increased each year. This suggests that companies are offering higher salaries to attract and retain talent.
- Both total salary and number of employees have increased significantly each year. This indicates company growth and increased investment in workforce expansion.
- Data roles consistently dominate the top salary spots. The high demand for data-related roles shows their critical importance in driving company decisions and strategies.
- Full-time roles dominate and increase each year. Companies prefer full-time employees for stability and long-term commitment.
- Senior-level employees consistently have the highest total salaries. Companies value experienced professionals and are willing to pay more for their expertise and leadership.
- Medium-sized companies have seen the highest growth in total salaries. Medium-sized companies are likely to expand rapidly and invest heavily in their workforce.

Key Insights

- Rising average salaries reflect competitive job markets and companies' efforts to attract top talent.
- Increasing total salaries and employee numbers indicate company growth and higher workforce investments, important for scaling operations.
- Consistently high salaries for data roles highlight their importance in leveraging data for strategic decisions and competitive advantage.
- Preference for full-time employees suggests companies seek stable, long-term relationships that drive consistent productivity and company culture.
- Higher salaries for senior levels show the value placed on experience and leadership, essential for guiding projects and achieving business goals.
- Medium-sized companies investing the most in salaries suggest they are in a growth phase, prioritizing talent acquisition to support their expansion.

Conclusion

Over the three years from 2020 to 2022, several key trends in employee salaries and workforce composition emerged

- The average salary consistently rose each year, reflecting a competitive job market and the need for companies to offer higher compensation to attract and retain top talent.
- Both the total salary paid and the number of employees increased significantly, indicating company growth and greater investment in expanding the workforce.
- Data-related job roles, such as Data Scientist, Data Engineer, and Data Analyst, consistently topped the salary charts, underscoring their critical importance in leveraging data for business decisions and strategies.
- The majority of the workforce each year comprised full-time employees, with companies showing a preference for stable, long-term relationships to ensure consistent productivity and maintain company culture.
- Senior-level employees commanded the highest total salaries, highlighting the premium placed on experience and leadership skills, which are crucial for guiding projects and achieving business goals.
- Medium-sized companies showed the highest growth in total salaries, suggesting they are in an expansion phase, investing heavily in talent to support their growth

THANK YOU