

Jobs & Salaries in Data field Dataset

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01

Dataset Overview



Introduction

- This dataset contains updated 2024 data from ai-jobs.net/salaries/2024/ from 2020 to 2024.
- Which is a website where people volunteer to offer their salary and employment information.
- This dataset will continue to grow and can be used for machine learning uses in the future

Data set Features

work_year

experience_level

employment_type

job_title

salary

salary_currency

salary_in_usd

employee_residence

work_setting

company_location

company_size

job_category



Sample of the dataset

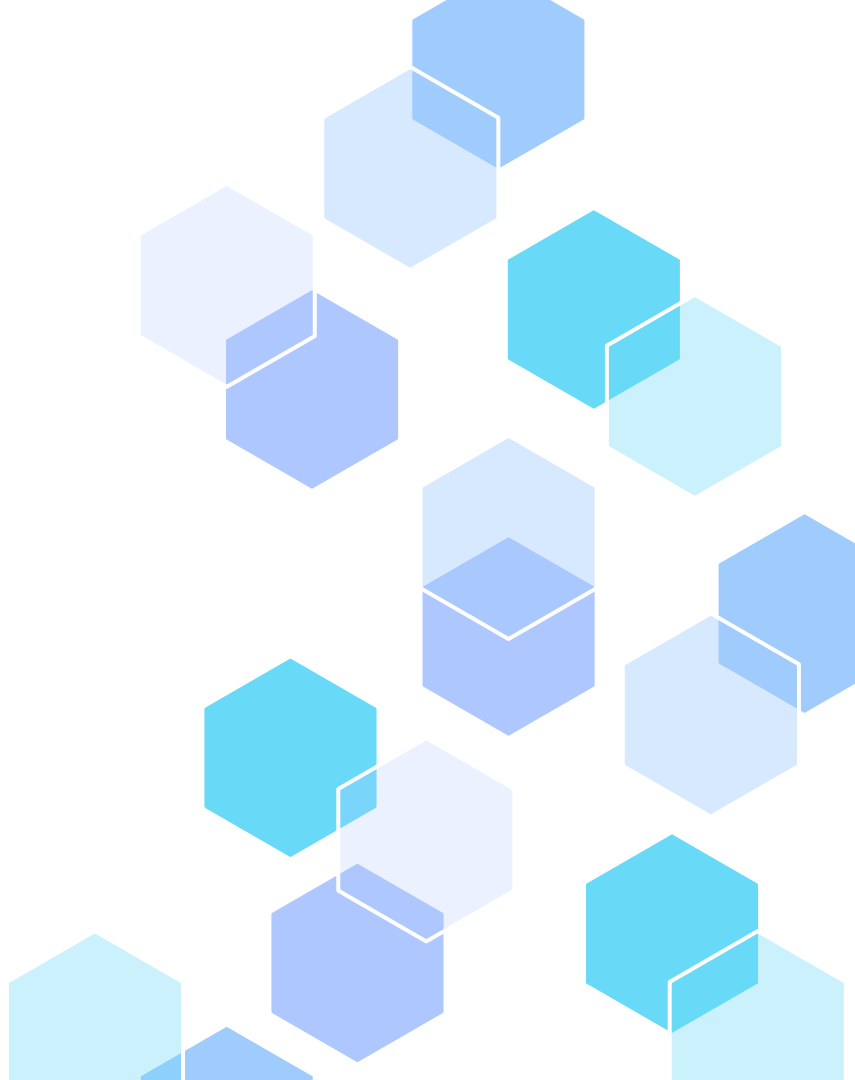
	work_year	experience_level	employment_type	job_title	salary	salary_currency	salary_in_usd	employee_residence	work_setting	company_location	company_size	job_category
8765	2023	Mid-level	Full-time	Research Scientist	275000.0	USD	275000	United States	In-person	United States	M	Data Science and Research
1883	2024	Senior	Full-time	Business Intelligence Engineer	165600.0	USD	165600	United States	In-person	United States	L	BI and Visualization
3626	2024	Mid-level	Full-time	Data Analyst	81713.0	USD	81713	United States	Remote	United States	M	Data Analysis
10100	2023	Executive	Full-time	Head of Data	110000.0	GBP	135344	United Kingdom	Remote	United Kingdom	M	Leadership and Management
5021	2023	Senior	Full-time	Data Engineer	124935.0	USD	124935	South Africa	In-person	South Africa	M	Data Engineering

- The dataset has 12 columns and 14.2K rows
- Data size is 1.67 MB
- Dataset can be accessed from the following QR code:



02

Dataset Beneficiaries



Dataset Beneficiaries

Job seekers

Job Providers

Industry
Professionals

Job posting
sites

Highschool
Graduates

University
Advisors



03

Dataset Processing



Dataset Processing

- **Salary and salary_in_usd were both of type int**

- As we know anything money related should be counted as float so we made those corrections as necessary.

- **No Null values were present in the dataset**

- Thankfully our dataset was free of any null values so we didn't have to deal with correcting that.

- **Duplicates should not be dropped in this case**

- This dataset contains jobs filled by actual people and it's very possible or even likely that multiple people have the same salaries in the same positions.

04

Feature Engineering



Feature Engineering

● encoding was performed on the company size column

- The dataset contains 3 different company sizes which are S, M, L
- These were encoded to 0,1,2 respectively to aid in further ML analysis in the future

● A new column was created named is_expatriate

- Given that the dataset has employee_residence and Job_location we can discern if the employee is an expatriate in the job country or not
- This can help determine if an employee would need a visa or would need to be compensated for relocation costs.

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Dataset Insights and visualization



Relationship Between Salary and Experience level

Executives get the highest salaries

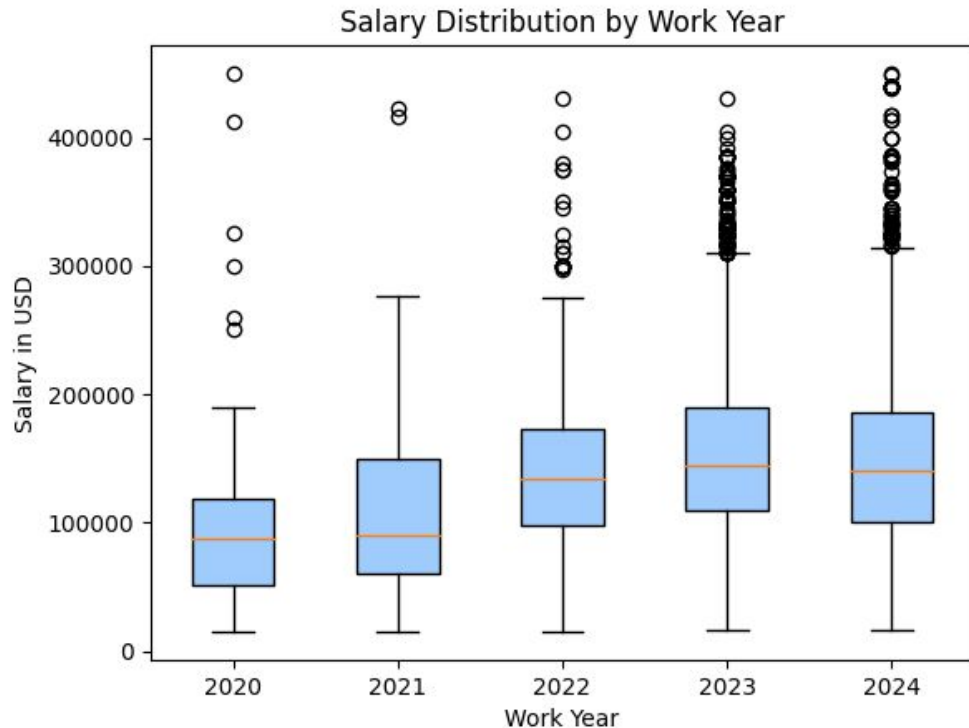
- We can see a very predictable distribution of salaries across experience levels where they increase from entry level to mid to senior to executive



Salary Distribution Across Work Years

● Upward trend in salaries across the years

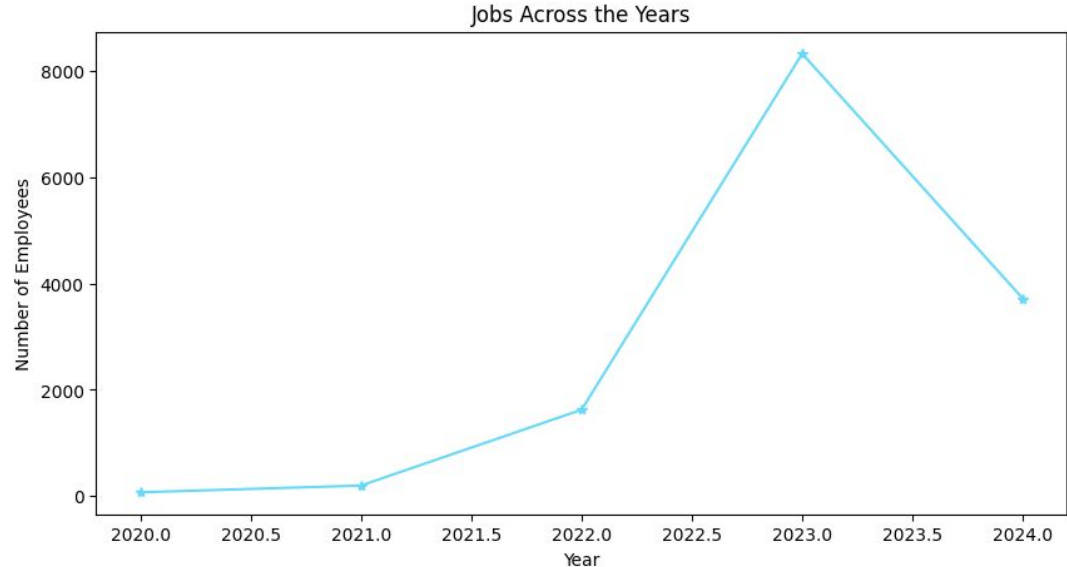
- We can notice a rise in average salaries from 2020 to 2023 with a slight decrease in 2024 but it's only March!
- The future trajectory is upward



Jobs Across Work Years

● Upward trend in jobs across the years

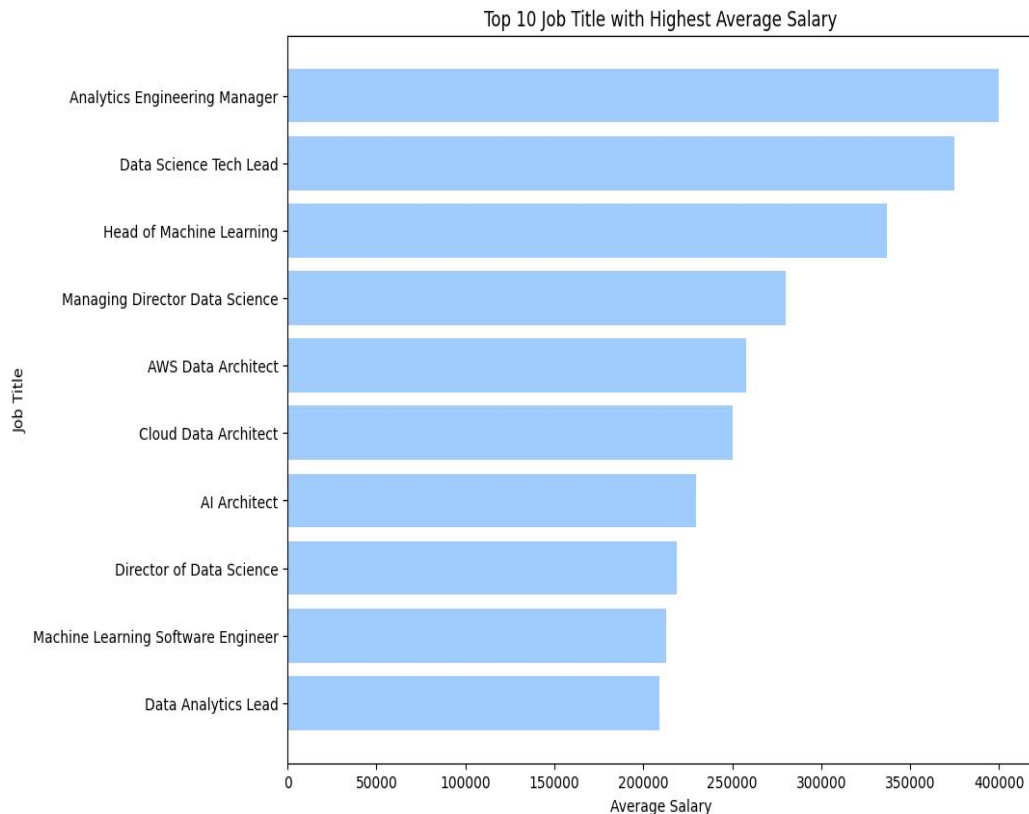
- We can notice an exponential rise in the jobs offered from 2020 to 2023 with a slight decrease in 2024 but we're only in its third month!
- 2024 is projected to far surpass 2023 in number of jobs.



Top 10 Job Titles with Highest average Salaries

● Aside from executive jobs, data and AI architects have the highest salaries

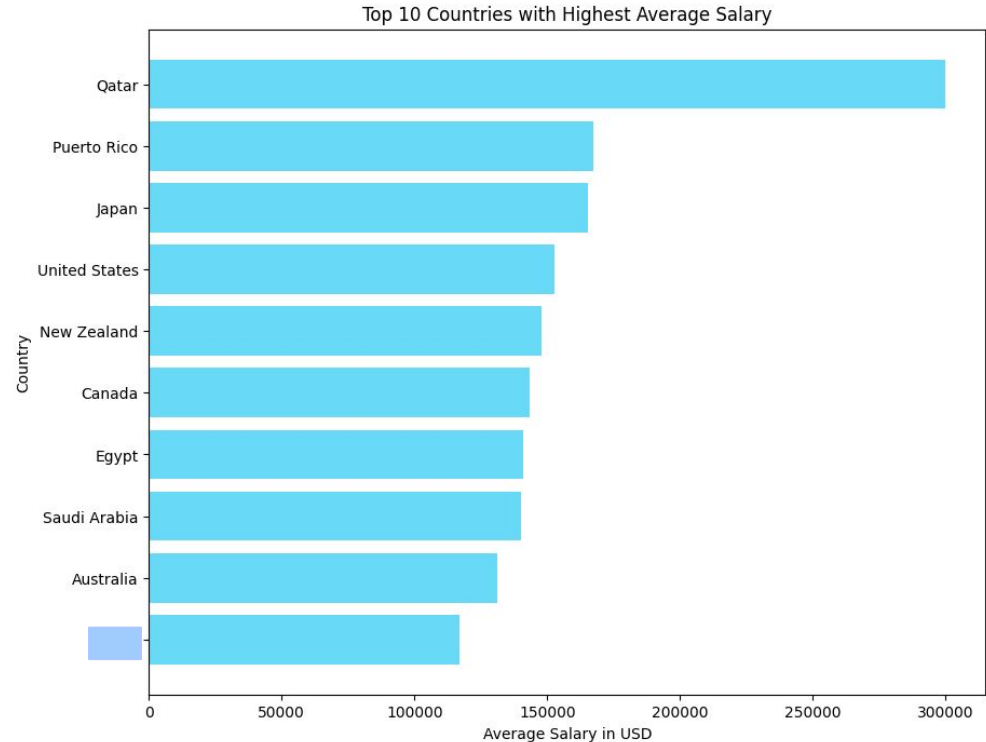
- From non-executive jobs, we can see that data and AI architects as well as computational biologists and machine learning engineers have the highest salary averages



Relationship Between Salary and Country

● Qatar, Puerto Rico and Japan offer the highest salaries

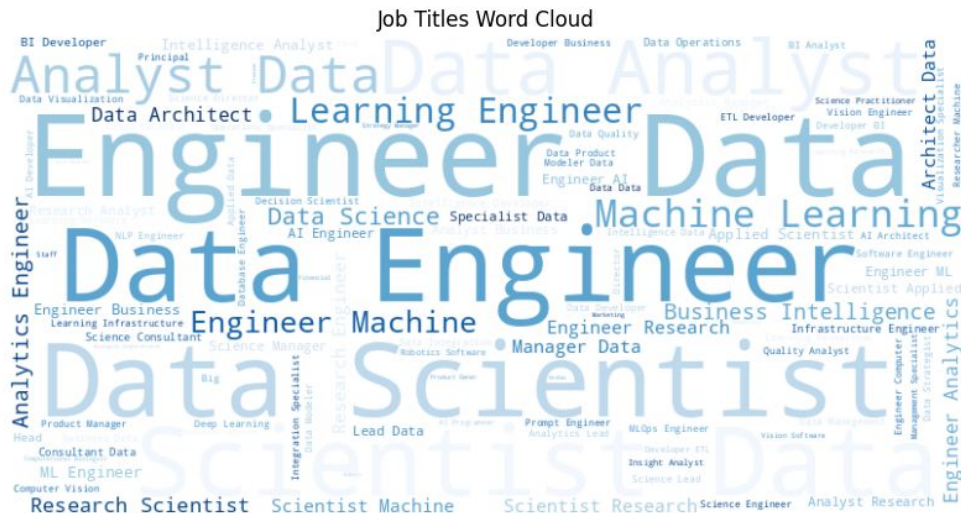
- By visualizing the top 10 countries with the highest salary averages, we can note that some countries offer better salaries than others
- Additionally we can note that Saudi Arabia is in the top 10



[illegible]

- **Data Engineer and Data Scientist are the most common job titles**

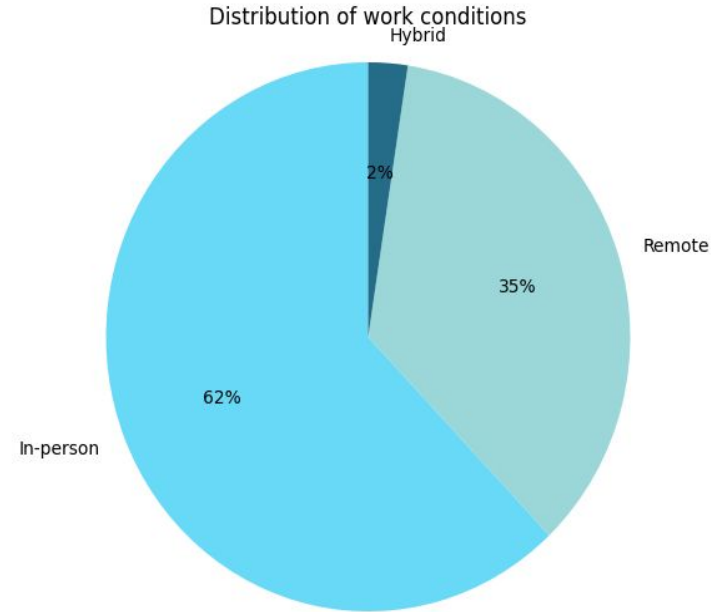
- We can see that Data Engineering and Data Scientist jobs are the most common
- Followed by Data Analyst and Research Scientist
- Words like Engineer, Data, and Scientist show up very prominently as well



Distribution of Work Conditions

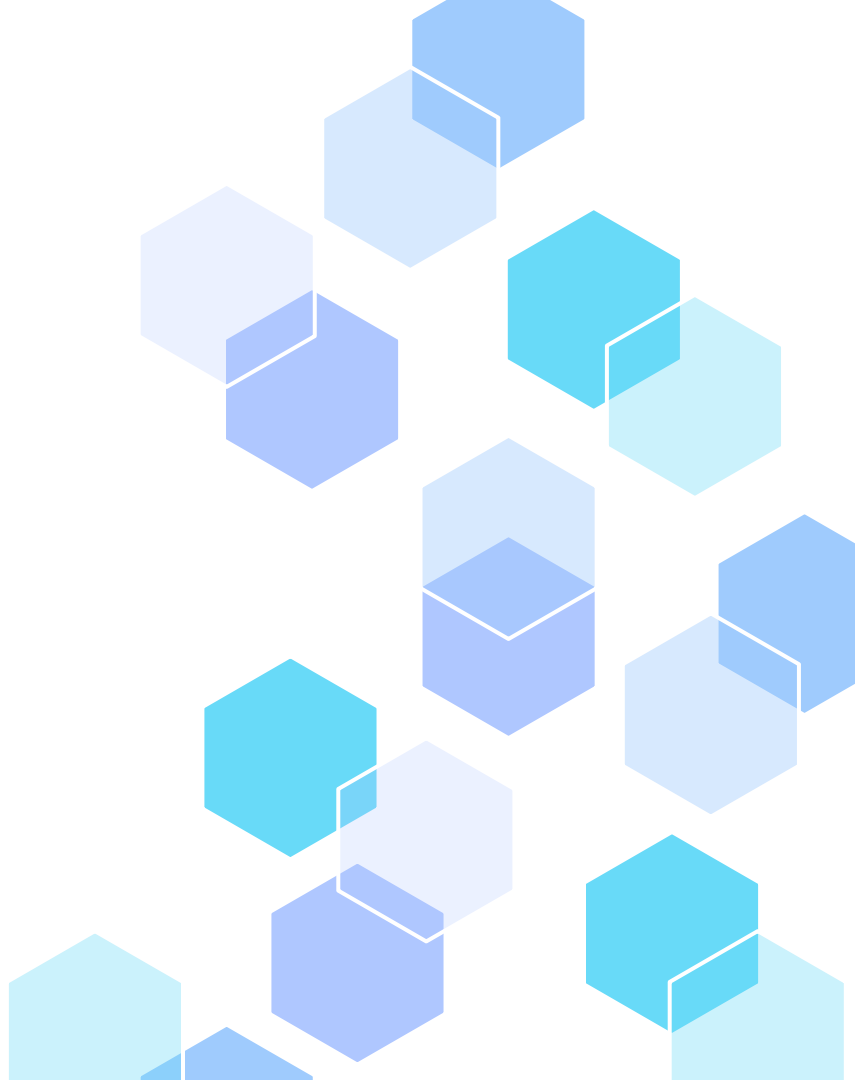
● The majority of jobs are in-person followed by Remote job

- We can see that most jobs are on-premise and about a third are remote
- The least amount of jobs are hybrid jobs due to the nature of the job, there isn't usually a need to switch between remote and in-person



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Conclusion



Conclusion

- Upward trend in salaries across the years with 2024 projected to have more jobs and better salaries in the future.
- Aside from executive jobs, data and AI architects have the highest salaries
- Qatar, Puerto Rico and Japan offer the highest salaries
- Data Engineer and Data Scientist are the most common job titles
- The majority of jobs are in-person followed by Remote job

Thanks!

Do you have any questions?

