

# Analysis of Salary of Data Analysts

SQL Project Portfolio

# Objective

- Investigate the average of salaries of data analysts based on some indicators :
  - Experience Level
  - Employment Type, etc
- Analyse a historical salaries data.
- Provide insights of financial prospects of pursuing data analyst career.

# Dataset Information

- work\_year : the year that salary was paid.
- experience\_level : the experience level in the job during the year.
- employment\_type : the type of employment for the role.
- job\_title : the role worked in during the year.
- salary : the total gross salary amount paid.
- salary\_currency : the currency of the salary paid as an ISO 4217 currency code.
- salary\_in\_usd : the salary in USD.
- employee\_residence : employee's primary country of residence in during work year as an ISO 3166 country code.
- remote\_ratio : the overall amount of work done remotely.
- company\_location : the country of the employer's main office or contracting branch as an ISO 3166 country code.
- company\_size : the average number of people that worked for the company during the year.

# Check a NULL values in the dataset

There is not a NULL data in the dataset. The dataset is clean and ready to use for further analysis.




```
1      -- 1. Check null data in some field --
2      select *
3      from salary
4      where experience_level is null or
5      employment_type is null or
6      job_title is null;
```

[illegible]

# Job Title related with Data Analyst

There are a 9 jobs that related with Data Analyst.

```
8      -- 2. What kind of jobs that related to "Data Analyst"
9      select distinct job_title
10     from salary
11     where job_title like "%Data Analyst%";
```

Result Grid   Filter Rows: <input type="text" value="Search"/> Export: 		
	job_title	
<input type="checkbox"/>	Product Data Analyst	
<input type="checkbox"/>	Data Analyst	
<input type="checkbox"/>	Business Data Analyst	
<input type="checkbox"/>	Lead Data Analyst	
<input type="checkbox"/>	BI Data Analyst	
<input type="checkbox"/>	Marketing Data Analyst	
<input type="checkbox"/>	Financial Data Analyst	
<input type="checkbox"/>	Finance Data Analyst	
<input type="checkbox"/>	Principal Data Analyst	

# Average Salary of Data Analysts

- The results of average salary is shown in **US Dollar**.
- The result show average salary of data analyst approximately **112298 USD**.

```
13      -- 3. Average Salary of Data Analyst
14      select avg(salary_in_usd) avg_salary
15      from salary;
16
```




Result Grid		Filter Rows:	Search	Export:
avg_salary				
112297.8699				



# Average Salary of Data Analyst : Experience Level

- There are 4 experience level of Data Analyst in the dataset.
- The highest average salary approximately 199392 USD for Expert level.
- The lowest average salary approximately 61643 USD for Entry level.

```
22  -- 5. Average Salary of Data Analyst Based On Experience Level
23  • SELECT experience_level, AVG(salary_in_usd) avg_salary
24  FROM salary
25  GROUP BY experience_level
26  ORDER BY avg_salary desc;
```

Result Grid   Filter Rows: <input type="text" value="Search"/> Export: 			
	experience_level	avg_salary	
	EX	199392.0385	
	SE	138617.2929	
	MI	87996.0563	
	EN	61643.3182	

# Average Salary of Data Analyst : Employment Types

- There are 4 employment types of Data Analyst in the dataset.
- The highest average salary approximately 184575 USD for Contract (CT) employees.
- The lowest average salary approximately 33070 USD for Part-time (PT) employees.

```
28  -- 6. Average Salary of Data Analyst : Employment Type --
29  * select employment_type, avg(salary_in_usd) avg_salary
30  from salary
31  group by employment_type
32  order by avg_salary desc;
```




	employment_type	avg_salary	
	CT	184575.0000	
	FT	113468.0731	
	FL	48000.0000	
	PT	33070.5000	



# Countries that have Interesting Salary in Data Analyst

- The result show the country that have a interesting salaries for **Full Time, Entry, and Mid-level**.
- Country that have a highest salary is **USA** with average salary approximately **101397 USD**.




```
34  -- 7. Countries with Interesting Salary in Data Analyst Work for "Entry Level / Mid Level" Position
35  • select company_location, avg(salary_in_usd) avg_salary
36      from salary
37      where job_title like "%Data Analyst%"
38            and employment_type = "FT"
39            and experience_level in ("EN","MI")
40      group by company_location
41      having avg_salary >= 10000
42      order by avg_salary desc;
```

Result Grid   Filter Rows: <input type="text" value="Search"/> Export: 			
	company_location	avg_salary	
<input type="checkbox"/>	US	101397.2069	
<input type="checkbox"/>	CA	70818.6667	
<input type="checkbox"/>	LU	59102.0000	
<input type="checkbox"/>	FR	52930.5000	
<input type="checkbox"/>	GB	50875.6000	
<input type="checkbox"/>	ES	38470.0000	
<input type="checkbox"/>	GR	32313.3333	
<input type="checkbox"/>	HN	20000.0000	
<input type="checkbox"/>	IN	12548.7500	
<input type="checkbox"/>	NG	10000.0000	

# Average Salary of Data Analyst on Each Year

- The query results show the average salary of Data Analyst from 2020-2022.
- The highest average salary is in 2022 by approximately **124522 USD**.
- Average salary are **relatively increase** from 2020 until 2022.

```
17  -- 4. Average Salary of Data Analyst per each Year
18  •  select work_year, avg(salary_in_usd) avg_salary
19      from salary
20      group by work_year;
```

Result Grid   Filter Rows: <input type="text" value="Search"/> Export: 			
	work_year	avg_salary	
<input type="checkbox"/>	2020	95813.0000	
<input type="checkbox"/>	2021	99853.7926	
<input type="checkbox"/>	2022	124522.0063	

# Trend of Average Salary : Mid-level to Expert

- The result show the average salary of Data Analyst relatively **decrease** during **2021-2022**.
- In terms of average salary differences, average salary of Data Analyst has a **bigger differences** in **2022** than 2021.

```
44 -- 8. Increase of Average Salary from Mid-level to Expert --
45 with sal_avg_exp as (
46     select work_year, avg(salary_in_usd) avg_salary_exp
47     from salary
48     where job_title like "%Data Analyst%"
49           and employment_type = "FT"
50           and experience_level = "EX"
51     group by work_year
52 ), sal_avg_mid as (
53     select work_year, avg(salary_in_usd) avg_salary_mid
54     from salary
55     where job_title like "%Data Analyst%"
56           and employment_type = "FT"
57           and experience_level = "MI"
58     group by work_year
59 )
```

```
60 select sal_avg_exp.work_year,
61        sal_avg_exp.avg_salary_exp,
62        sal_avg_mid.avg_salary_mid,
63        sal_avg_exp.avg_salary_exp - sal_avg_mid.avg_salary_mid differences
64 from sal_avg_exp
65 left outer join sal_avg_mid
66 on sal_avg_exp.work_year = sal_avg_mid.work_year;
```

	work_year	avg_salary_exp	avg_salary_mid	differences	
	2021	150000.0000	108398.8182	41601.1818	
	2022	120000.0000	68970.5909	51029.4091	

# Insight

- There are 9 jobs that related with Data Analyst can be considered to pursue as career.
- The average salary of job that related with Data Analyst around \$112k.
- The highest average salary for Data Analyst is for Expert Level and the lowest average salary is Entry Level.
- The highest average salary for Data Analyst is for Contract employee and the lowest average salary is Part-Time employee.
- USA has a highest average salary for Data Analyst (Full-Time, Entry, Mid-level).
- The average salary for Data Analyst increase in every year during 2020-2022.
- The negative difference value in 2022 could be due to several reasons such as economic factors, external events, etc.

THANK YOU