

# FINAL PROJECT

**Menganalisa pekerjaan  
dalam bidang data yang  
paling banyak diminati di  
negara Amerika dan Eropa**

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ANASTHASIA SUCI

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INSIGHT&RECOMENDATION

# DATA SET

<https://www.kaggle.com/datasets/hummaamqaasim/jobs-in-data/data>



	work_year	job_title	job_category	salary_currency	salary	salary_in_usd	employee_residence	experience_level
0	2023	Data DevOps Engineer	Data Engineering	EUR	88000	95012	Germany	Mid-level
1	2023	Data Architect	Data Architecture and Modeling	USD	186000	186000	United States	Senior
2	2023	Data Architect	Data Architecture and Modeling	USD	81800	81800	United States	Senior
3	2023	Data Scientist	Data Science and Research	USD	212000	212000	United States	Senior
4	2023	Data Scientist	Data Science and Research	USD	93300	93300	United States	Senior

# DATA PREPROCESSING

```
[ ] Data columns (total 12 columns):  
#   Column                Non-Null Count  Dtype  
---  -  
0   work_year              9355 non-null  int64  
1   job_title              9355 non-null  object  
2   job_category           9355 non-null  object  
3   salary_currency        9355 non-null  object  
4   salary                 9355 non-null  int64  
5   salary_in_usd          9355 non-null  int64  
6   employee_residence     9355 non-null  object  
7   experience_level        9355 non-null  object  
8   employment_type        9355 non-null  object  
9   work_setting           9355 non-null  object  
10  company_location       9355 non-null  object  
11  company_size           9355 non-null  object  
dtypes: int64(3), object(9)  
memory usage: 877.2+ KB
```

```
df.isnull().sum()
```

```
work_year      0  
job_title      0  
job_category   0  
salary_currency 0  
salary         0  
salary_in_usd  0  
employee_residence 0  
experience_level 0  
employment_type 0  
work_setting   0  
company_location 0  
company_size   0  
dtype: int64
```

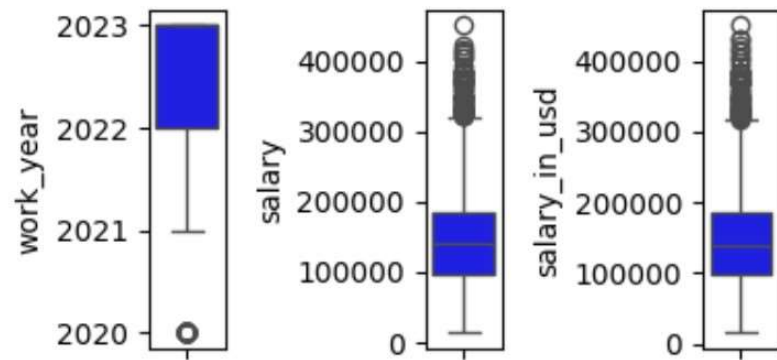
```
[9] df.duplicated().sum()
```

```
4014
```

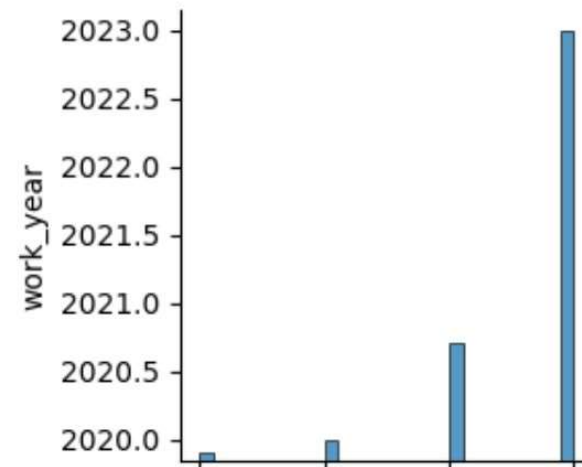
# VISUALIZATION

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## BOXPLOT TO DETECT OUTLIER



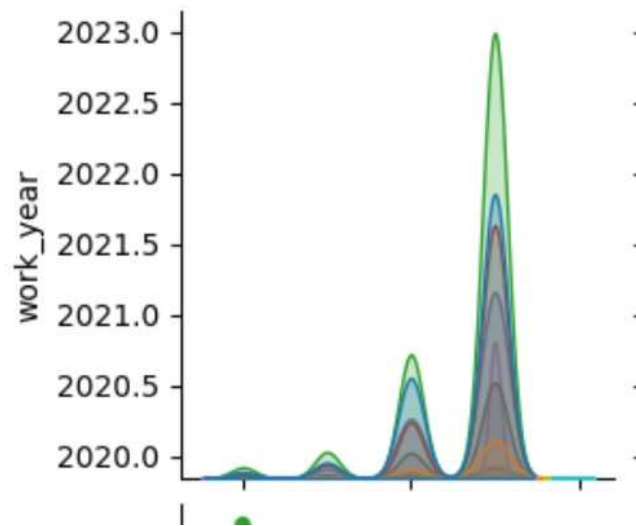
## INTERPRETATION



# VISUALIZATION

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## INTERPRETATION



## JOB CATEGORY

- job\_category
- Data Engineering
  - Data Architecture and Modeling
  - Data Science and Research
  - Machine Learning and AI
  - Data Analysis
  - Leadership and Management
  - BI and Visualization
  - Data Quality and Operations
  - Data Management and Strategy
  - Cloud and Database

# DATA ANALYST

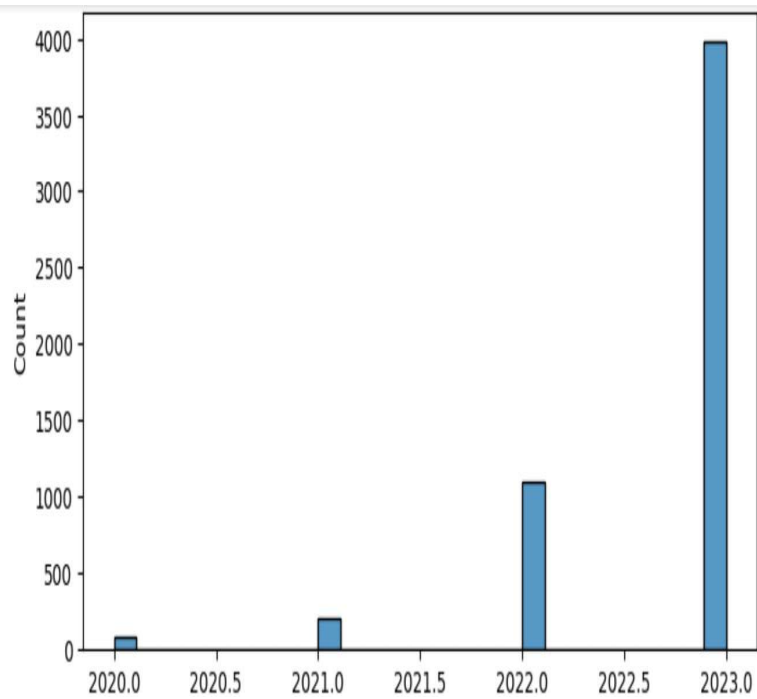
What type of job\_category is most popular with jobs in data in US and Europe?



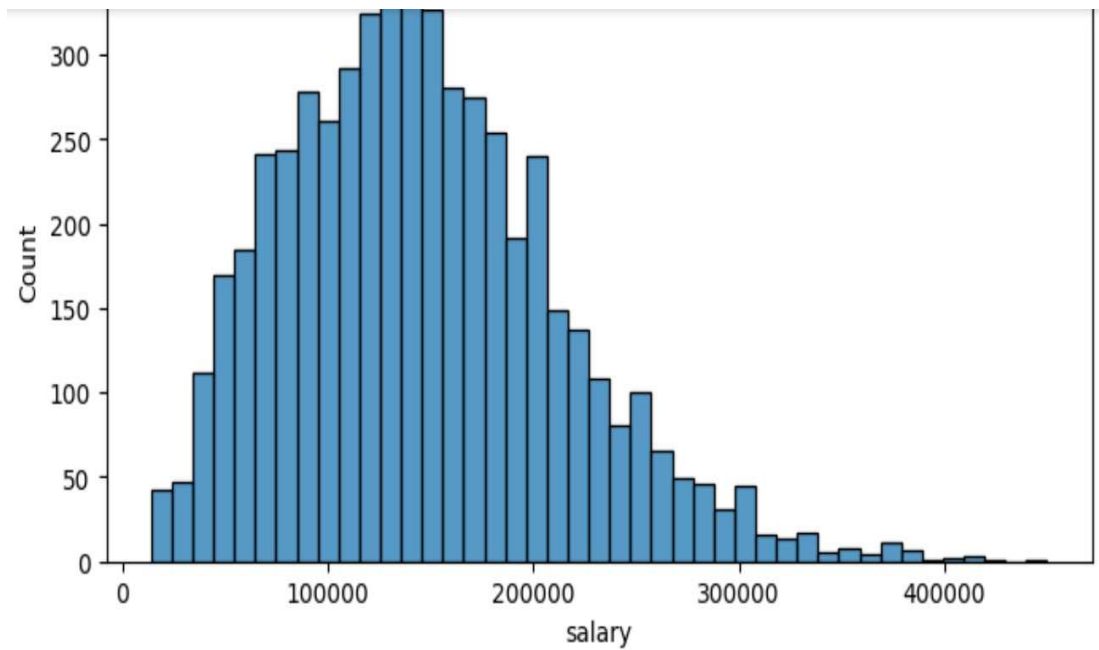


# MACHINE LEARNING

CLUSTERING

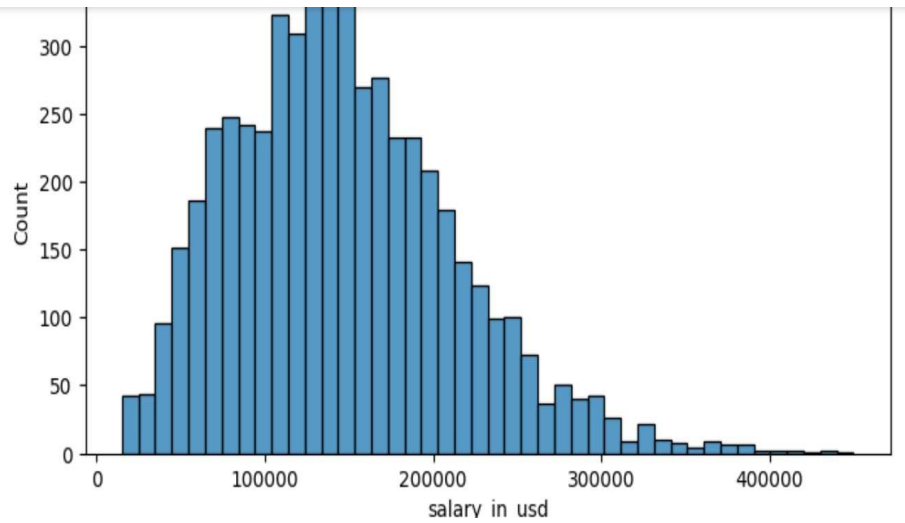


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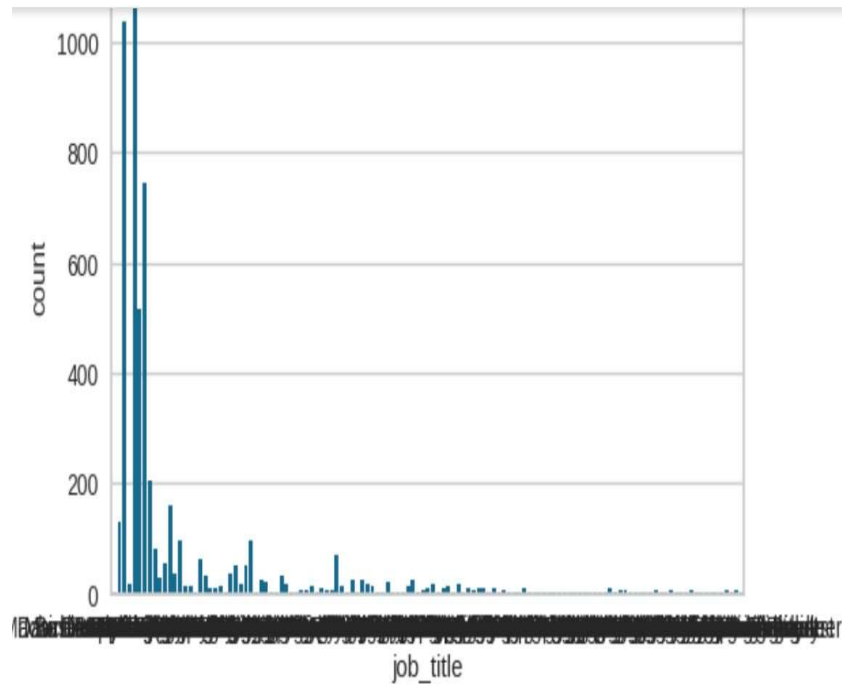


# MACHINE LEARNING

CLUSTERING

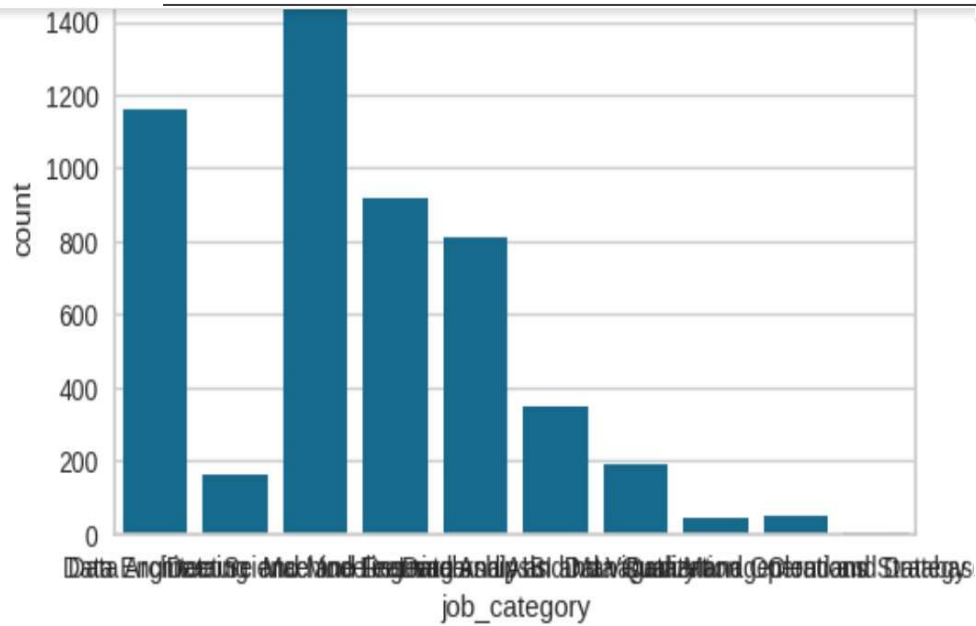


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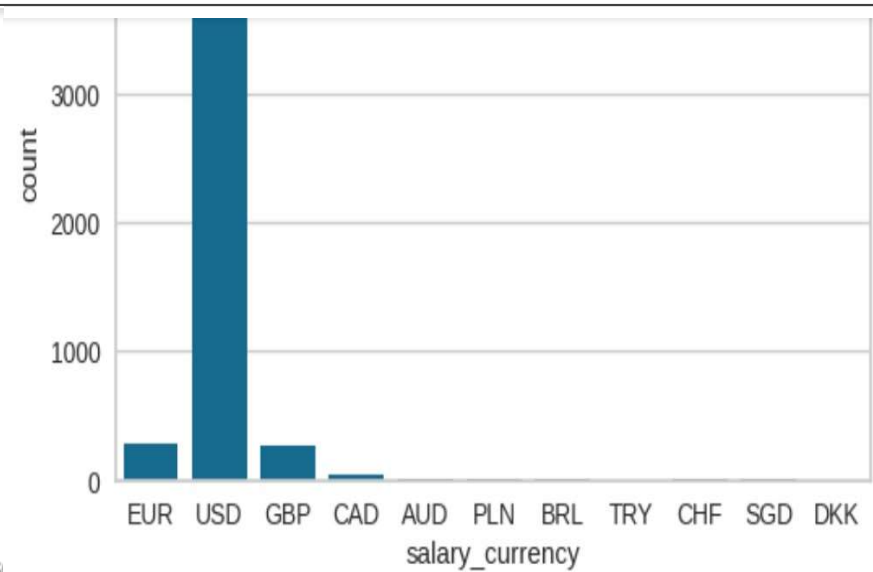


# MACHINE LEARNING

CLUSTERING

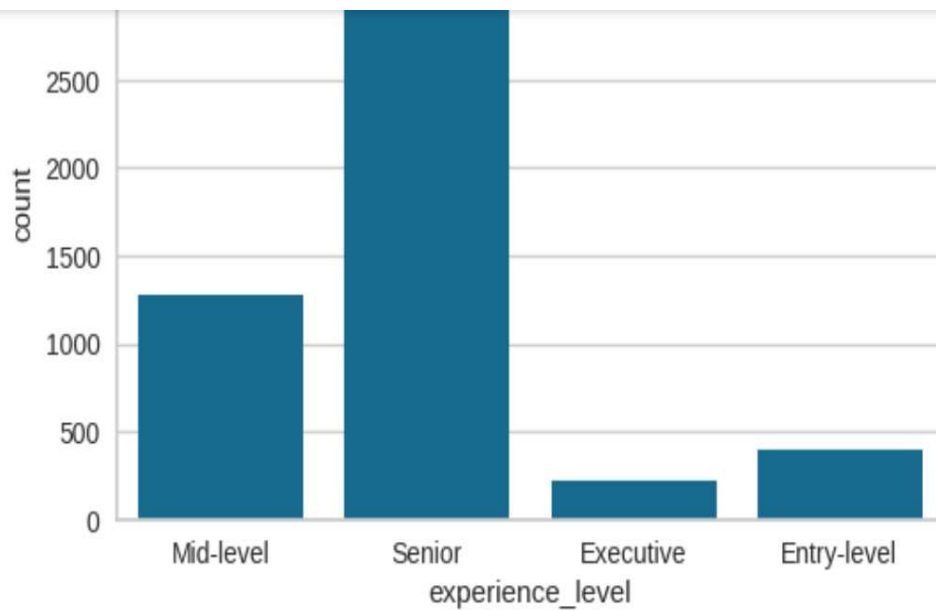


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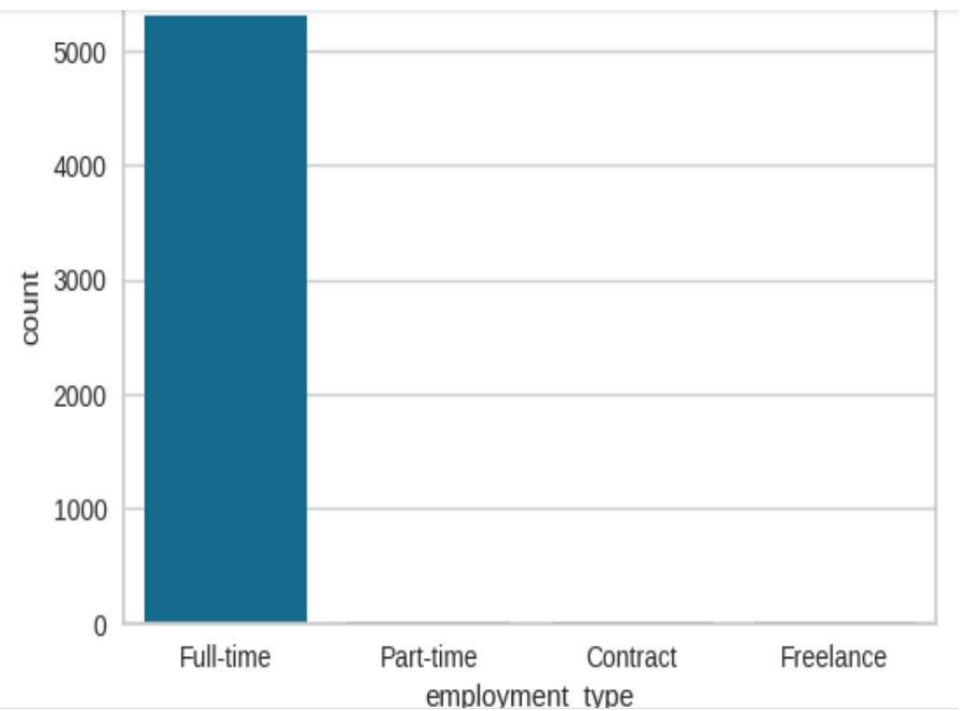


# MACHINE LEARNING

CLUSTERING

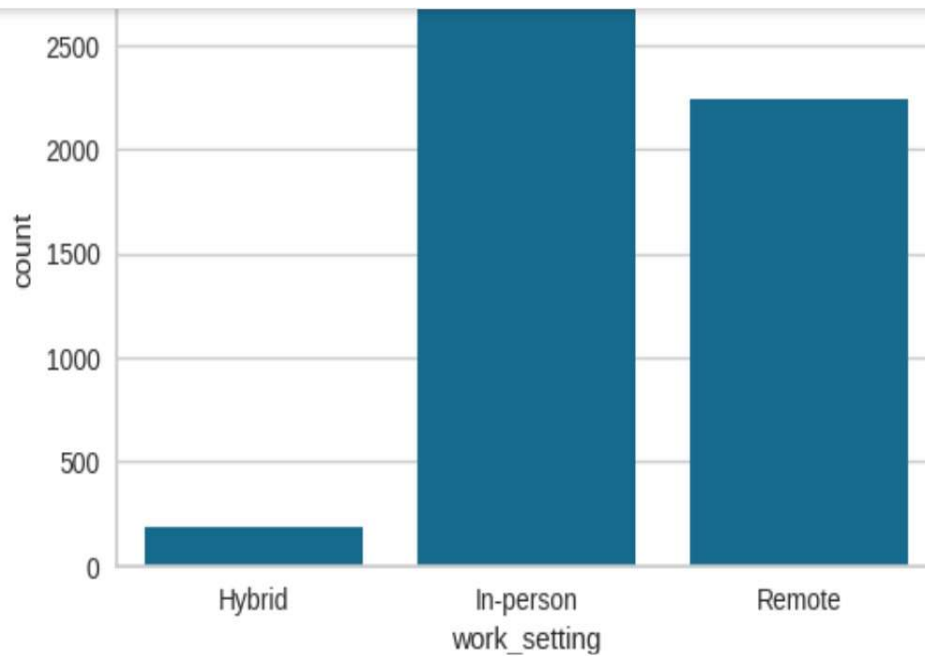


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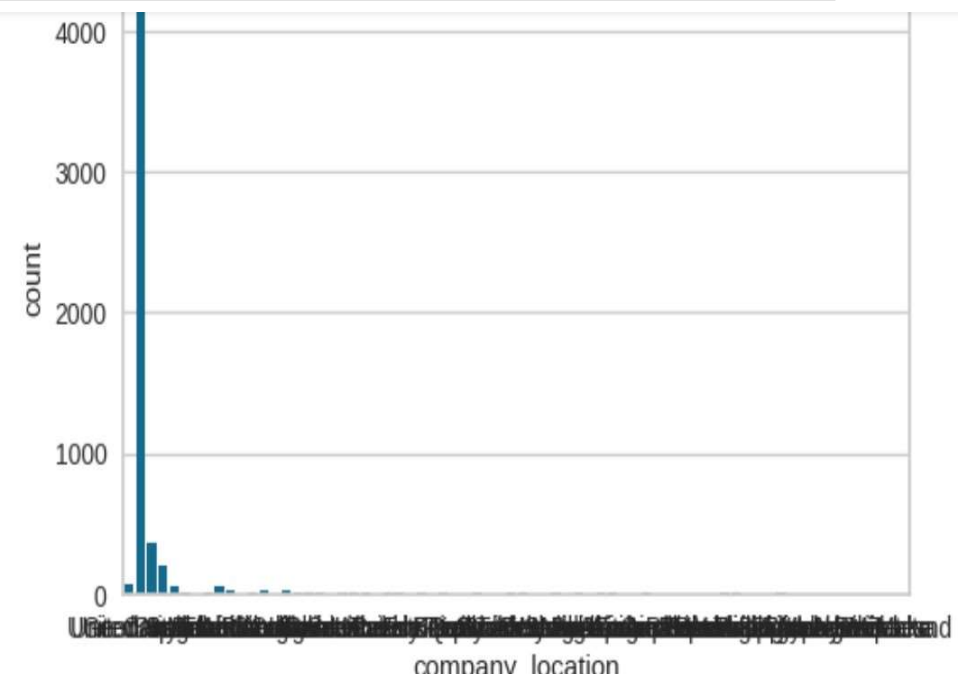


# MACHINE LEARNING

## CLUSTERING

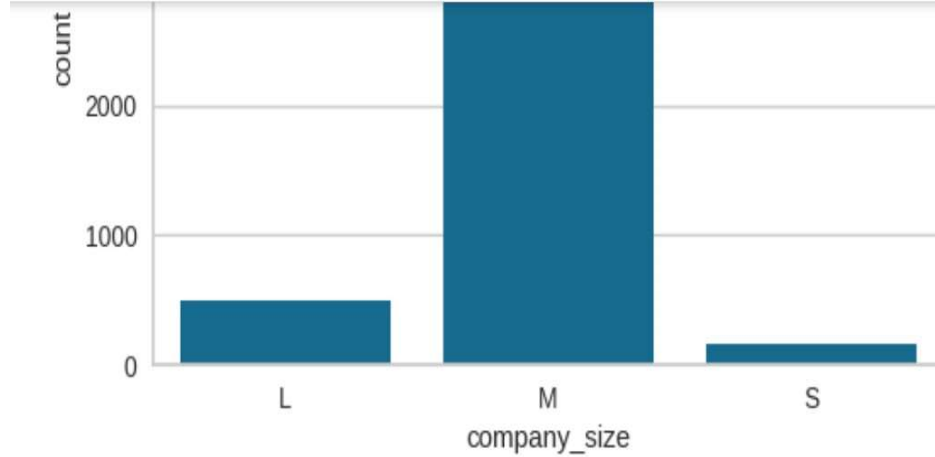


## CLUSTERING

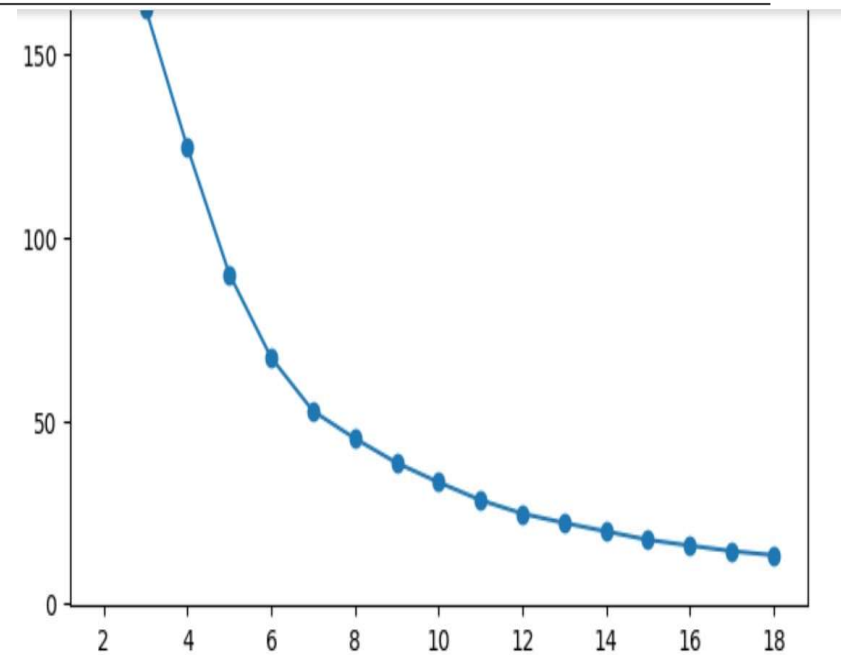


# MACHINE LEARNING

CLUSTERING

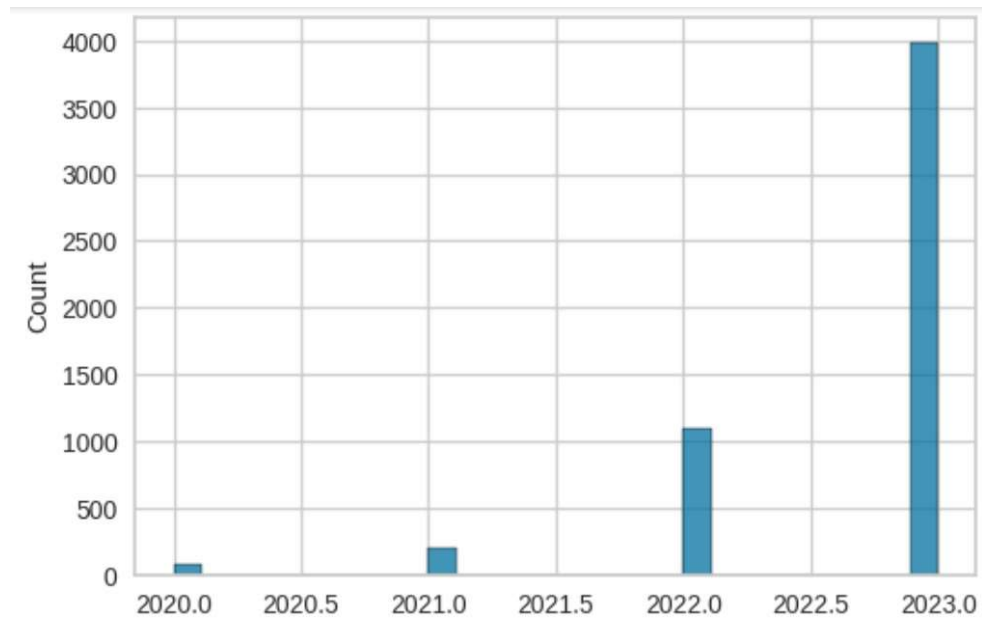


CLUSTERING K-Means

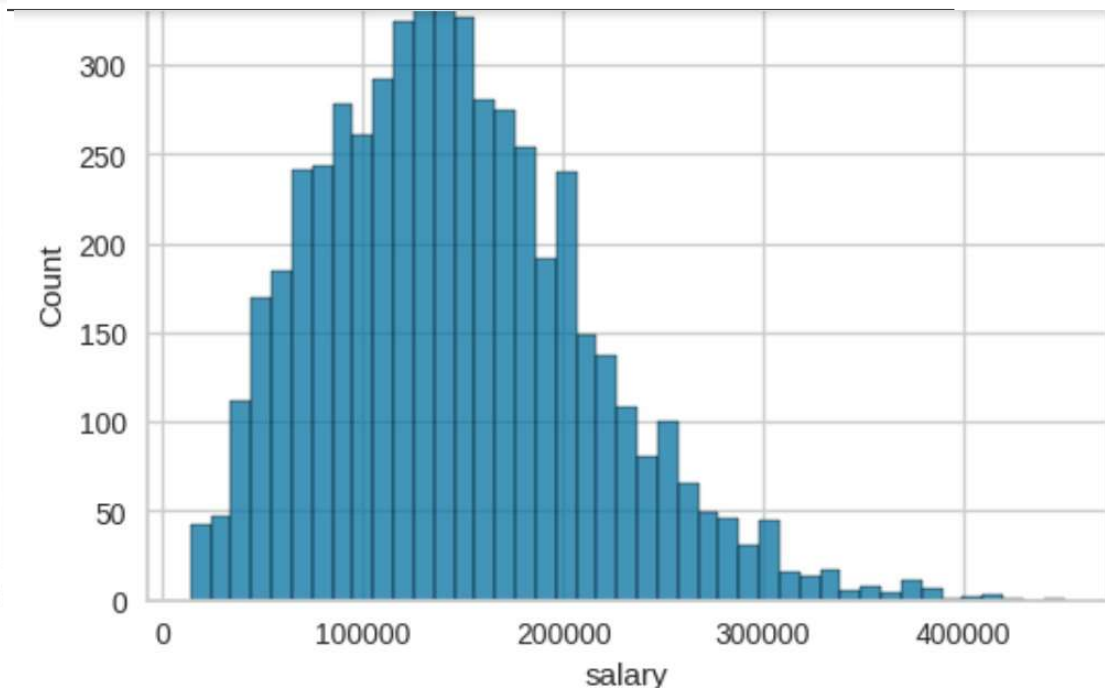


# MACHINE LEARNING

CLUSTERING JOB CATEGORY

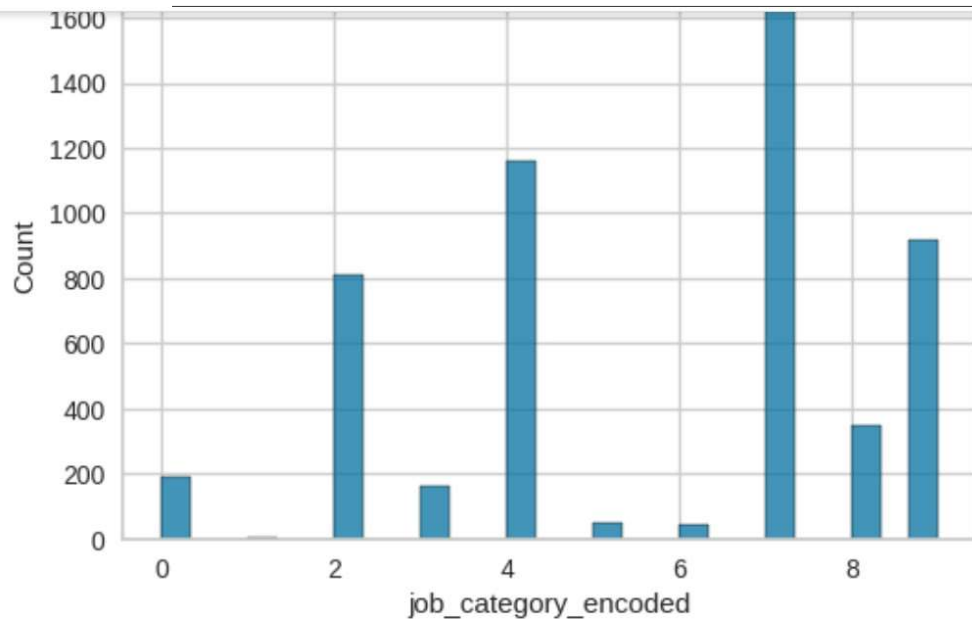


CLUSTERING JOB CATEGORY

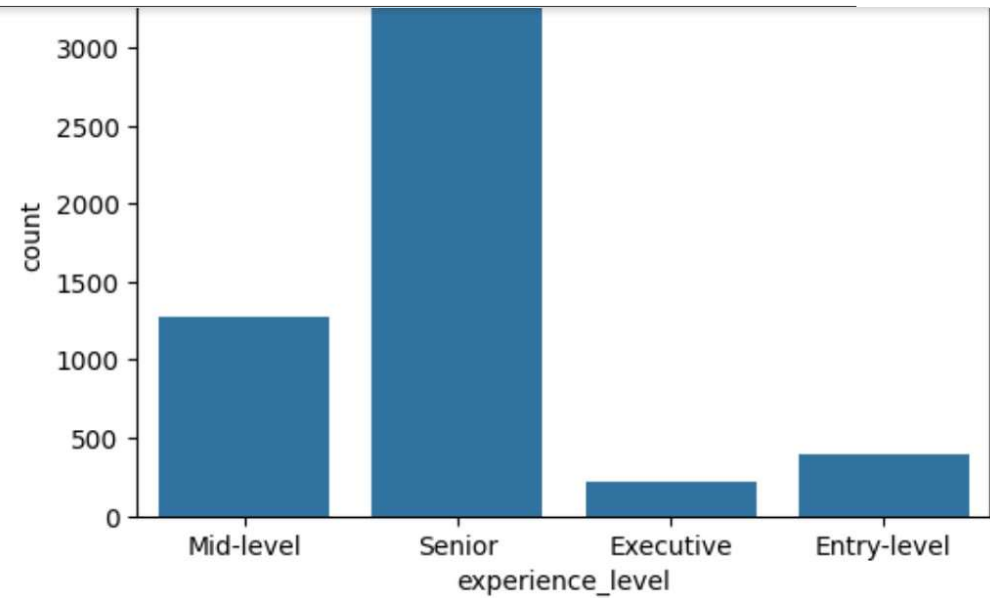


# MACHINE LEARNING

CLUSTERING JOB CATEGORY



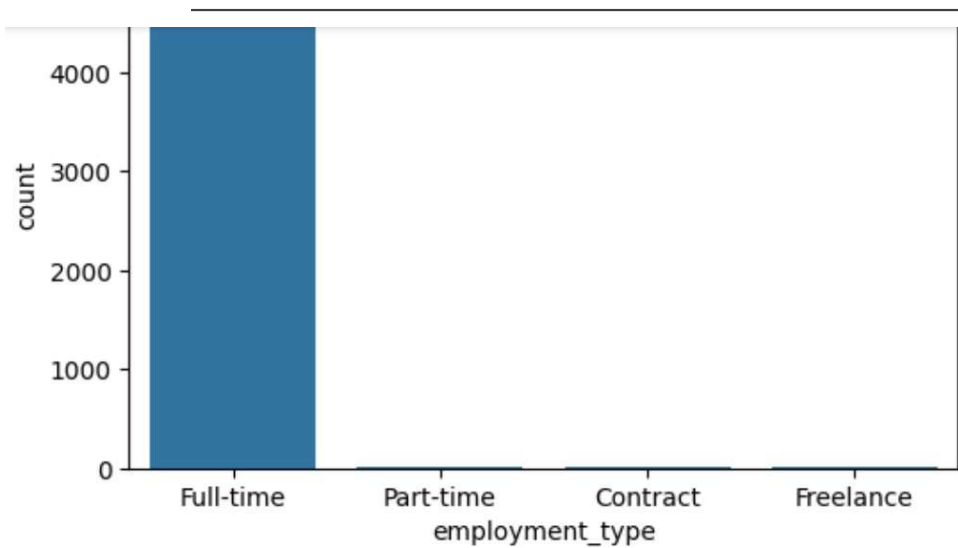
CLUSTERING JOB CATEGORY



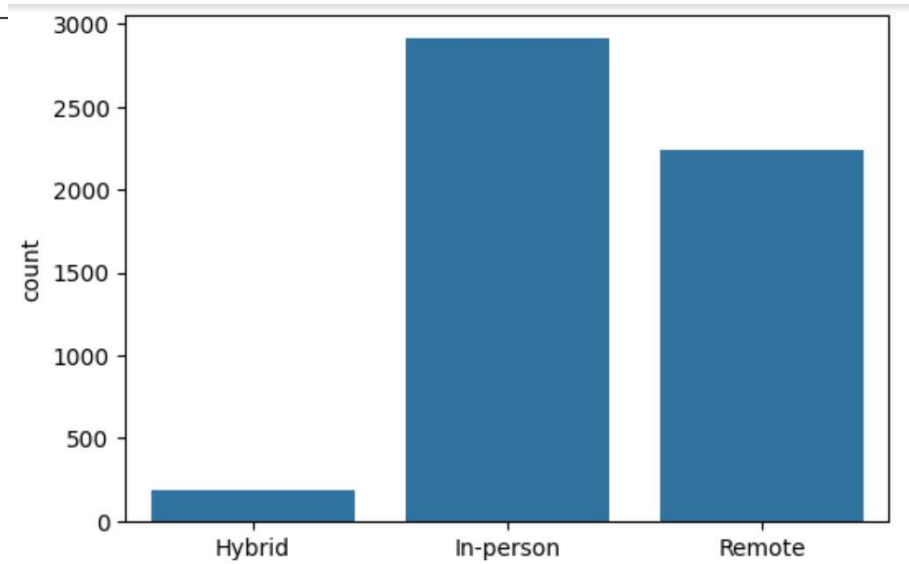


# MACHINE LEARNING

CLUSTERING JOB CATEGORY

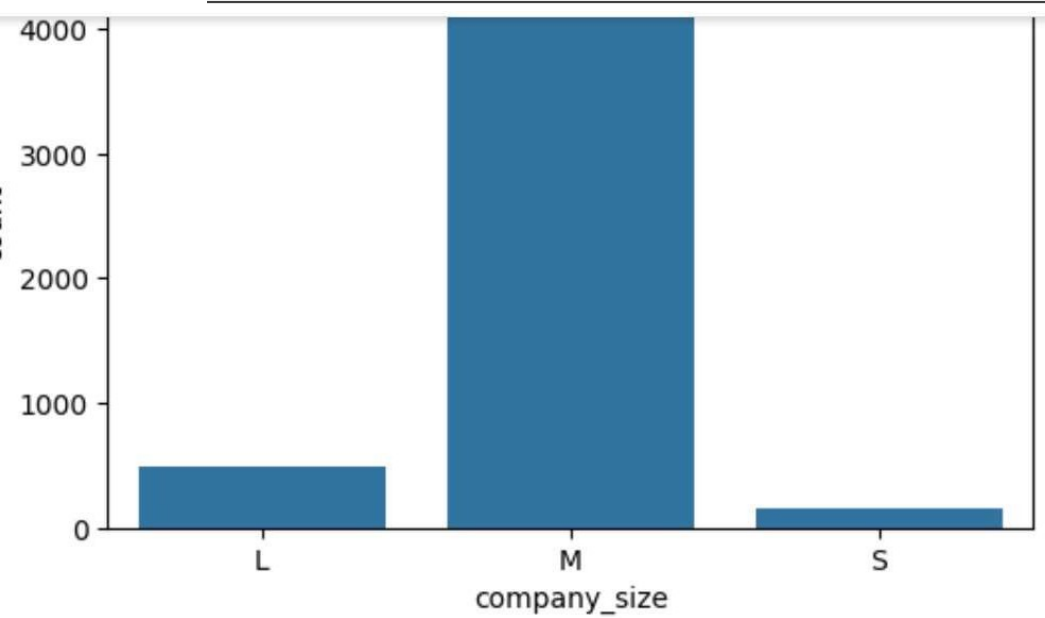


CLUSTERING JOB CATEGORY

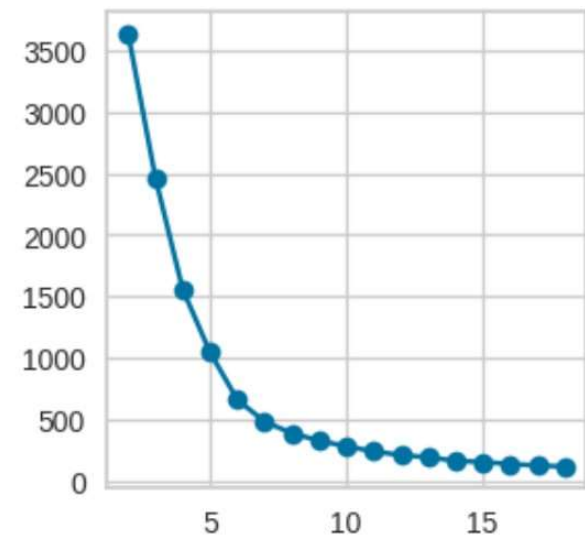


# MACHINE LEARNING

CLUSTERING JOB CATEGORY



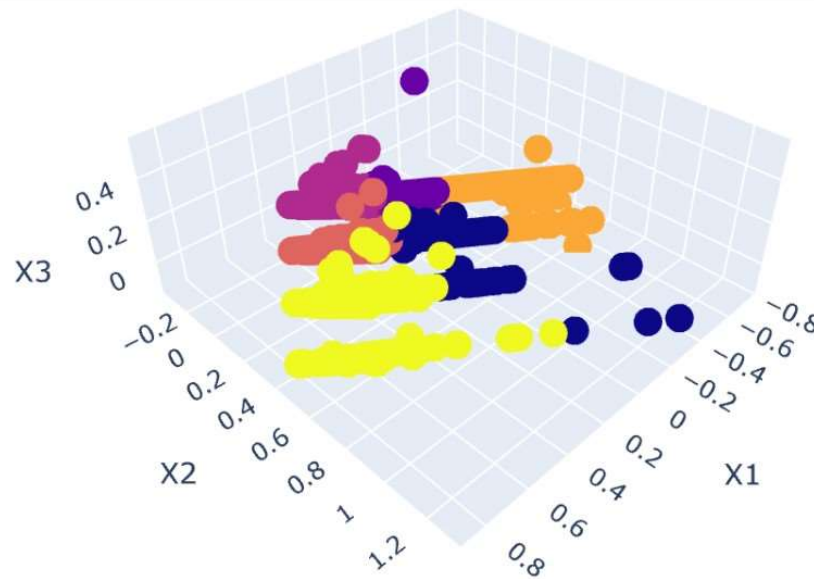
CLUSTERING JOB CATEGORY



# MODEL EVALUATION

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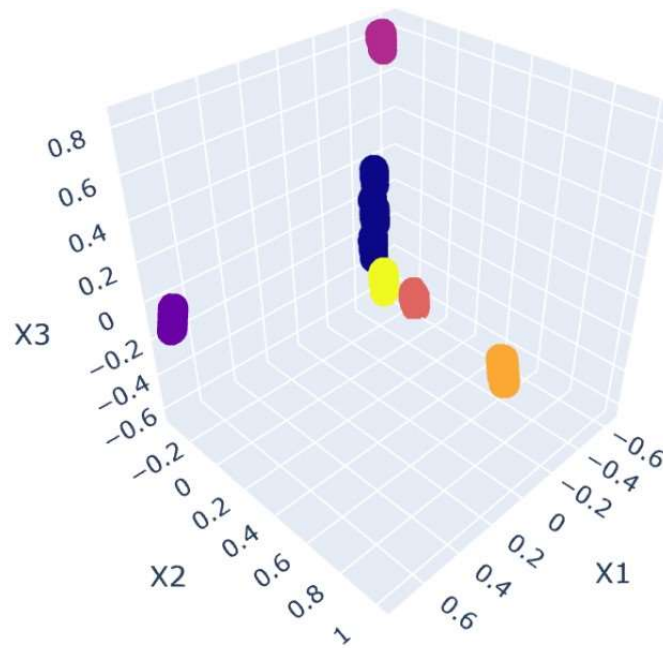
Label 5 (kuning)  
paling dominan



# MODEL EVALUATION

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Label 0 (biru)  
paling dominan



# INSIGHT & RECOMMENDATION

## INSIGHT

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### Observation:

1. The highest rank in the job\_title column is Data Engineer with 1100.
2. The highest rank in the job\_category column is Data Science and Research with 1655.
3. The highest rank in the salary\_currency column is USD with 4707.
4. The highest rank in the employee\_residence column is United States with 4255.
5. The highest rank in the experience\_level column is Senior with 3444.
6. The highest rank in the employment\_type column is Full-time with 5296.
7. The highest rank in the work\_setting column is In-person with 2913.
8. The highest rank in the company\_location column is United States with 4301.
9. The highest rank in the company\_size column is M with 4688.

# INSIGHT & RECOMMENDATION

## RECOMMENDATION

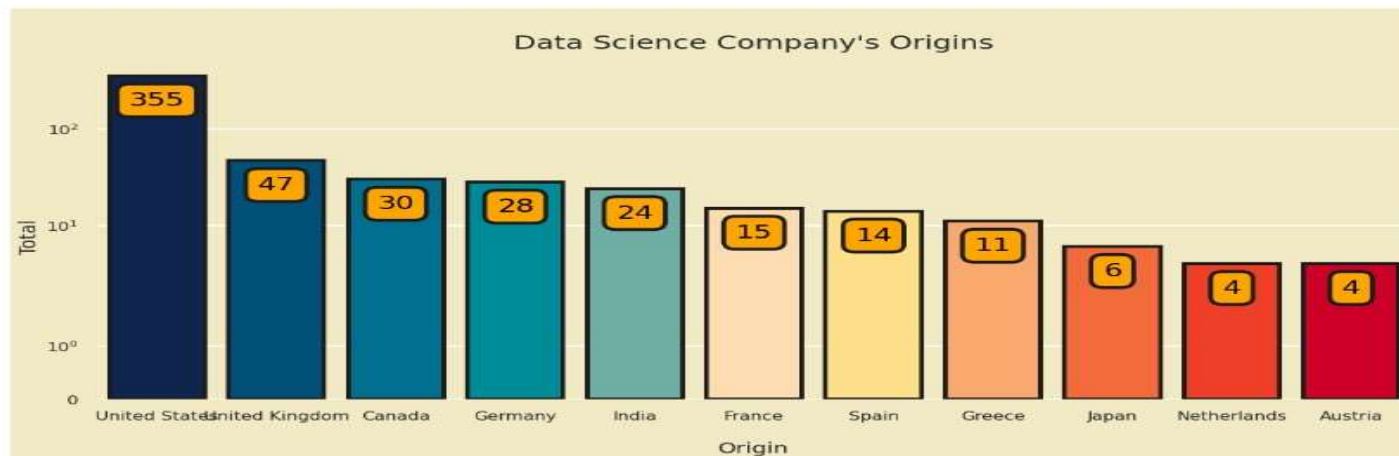


# ADDITIONAL INSIGHT

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Let's have a look on the company's origins :



# ADDITIONAL INSIGHT

ADDITIONAL INSIGHT



MARKETS ▾

## **The Top 10 Data Science Jobs for the Newbies in 2023 are enlisted in this article**

Data science is no longer a fancy term. Almost every sector that one can think of relies on data science in one form or the other. Today, this field has become so popular among individuals that every other person wants to make a career in data science. Data science is one of the most promising career opportunities that one can explore. On that note, let us have a look at the top 10 data science jobs for the newbies in 2023.



# REFERENCES

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- <https://www.kaggle.com/datasets/hummaamqaasim/jobs-in-data/data>
- <https://www.kaggle.com/code/hasibalmuzdadid/data-science-jobs-salary-analysis-retro-vibe>
- <https://www.analyticsinsight.net/top-10-data-science-jobs-for-the-newbies-in-2023/>