# JOB ANALYSIS REPORT

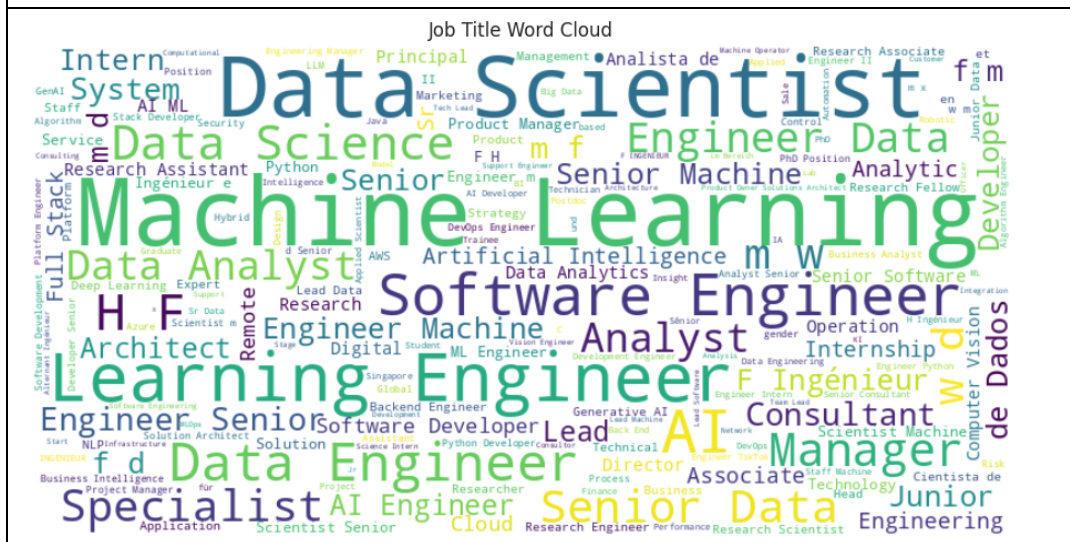*Machine learning jobs globally*

29/07/2004

INTRODUCTION

Machine learning and artificial intelligence are the buzzwords for the 2020's. The global market size for AI is estimated to be USD 196.63 billion in 2023 and is projected to grow at a CAGR of 36.6% from 2024 to 2030. This report consists of a job market analysis done using Glassdoor in the month of July 2024.
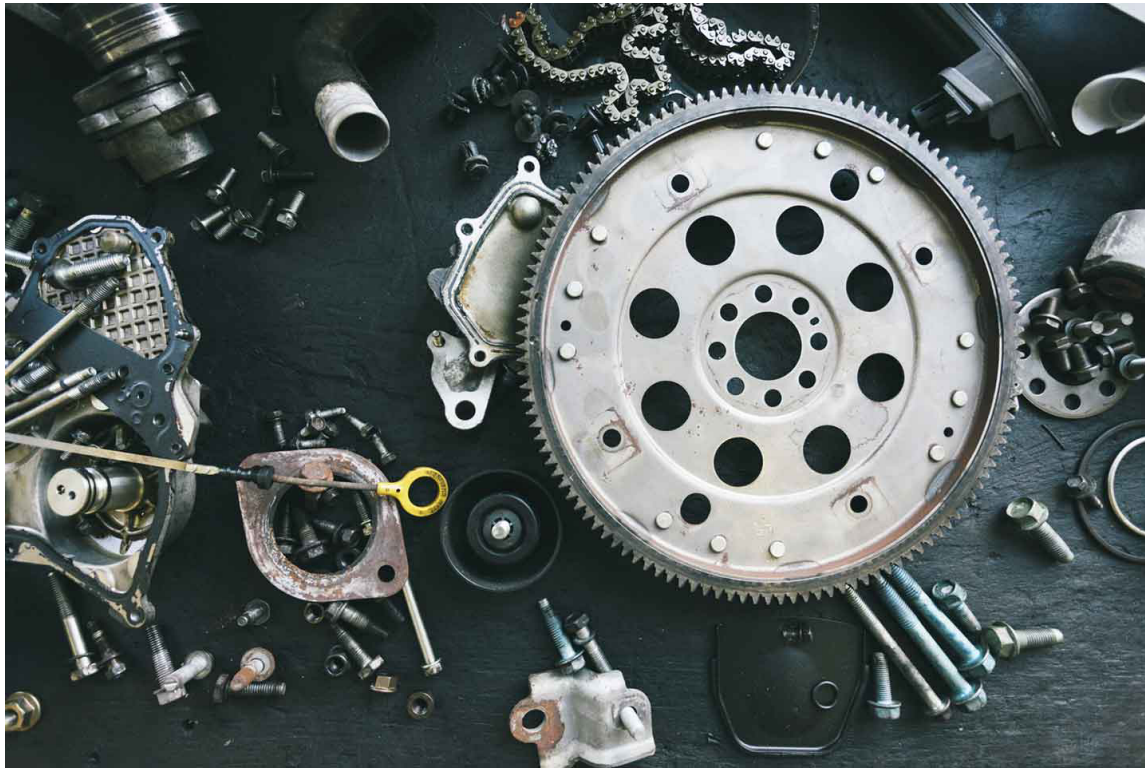
Data collection approach and method
1. "Jobspy" was used as a tool to scrape the required data. checked that the tool supports "indeed", "LinkedIn", "zip_recruiter" and "Glassdoor". 2. Of the data set scrapped Glassdoor had the better set based on df.info() and not-null fields. 3. Found out the countries that Glassdoor publishes data for and scrapped data for all those countries 4. The search was limited for 'machine learning' 5. Data was then cleaned with 'dropna' and analysis around the job market and salaries were conducted
 Job Title Word Cloud

General Stats

Trend of Machine learning Job Postings Over Time
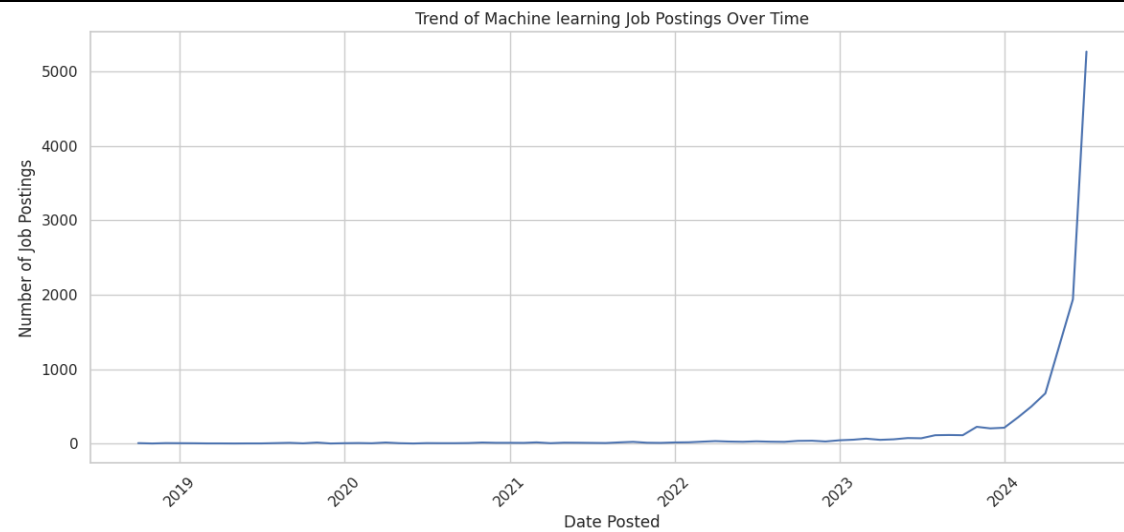
We see a sharp increase in machine learning job posting in 2024 , generally indicates the potential of the growing market and the various opportunities it brings

Job Count by Country
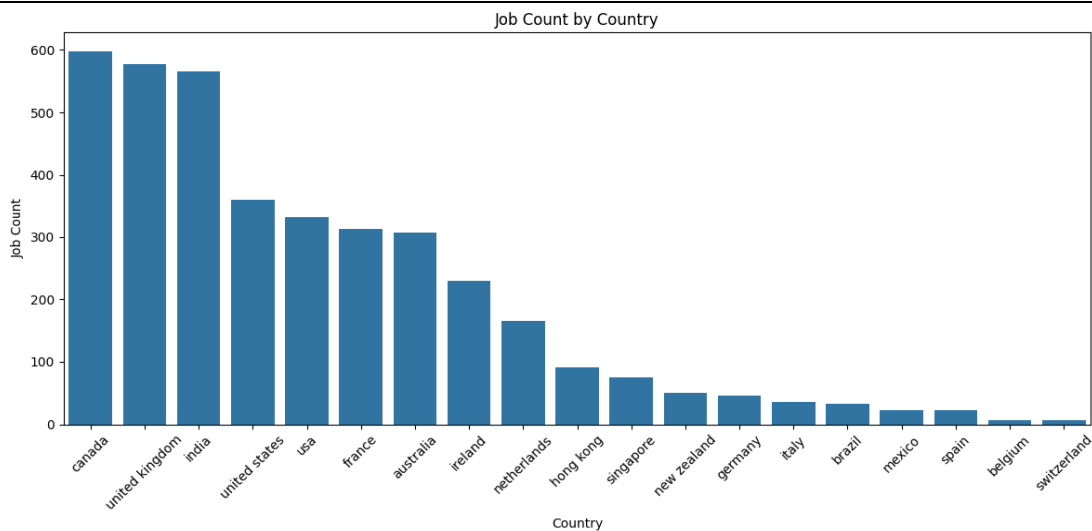
Canada , UK and India leads in terms of jobs posted for machine learning

Salary distribution charts

Distribution of Z-scores for Min and Max Salaries
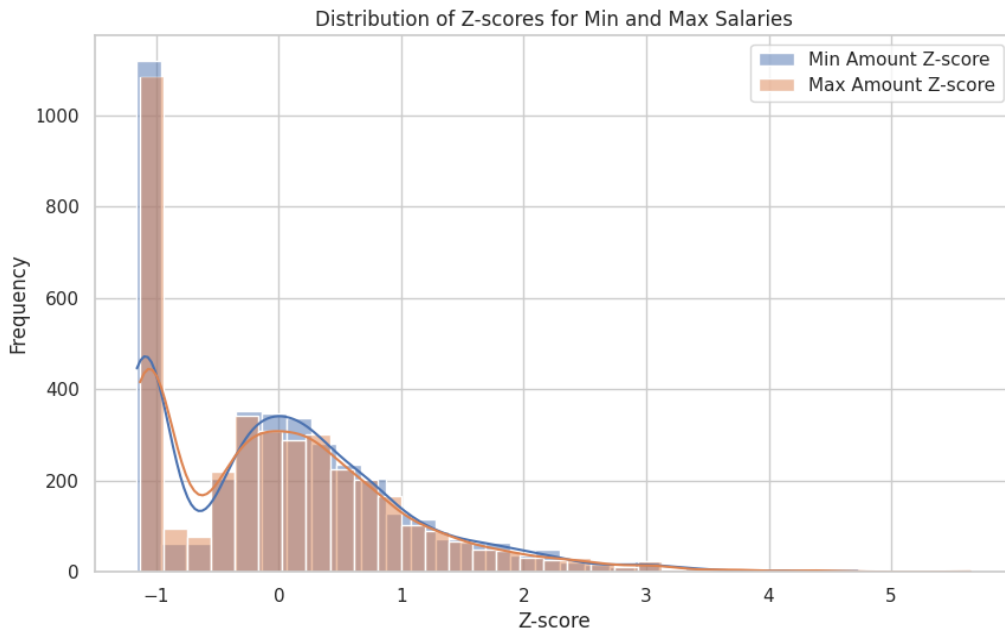
There is a high count of jobs whose salaries are at -1 (one SD below than mean) , which may indicate that more jobs may be entry level which offer lesser salaries

Salary Distribution by Country (Converted to USD)

We see an interesting trend when it comes to salary distribution, Netherlands seems to have the most outliers, while for Belgium, Germany and Singapore the median of the box is almost not visible or at the lower side of the 50% of the data. Similarity w.r.t to distribution can be seen for New Zealand and Ireland. With the Graph below we see noticeable disparity in min and max salary distribution in US .

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Distribution of Min and Max Amount USD Z-Scores by Country
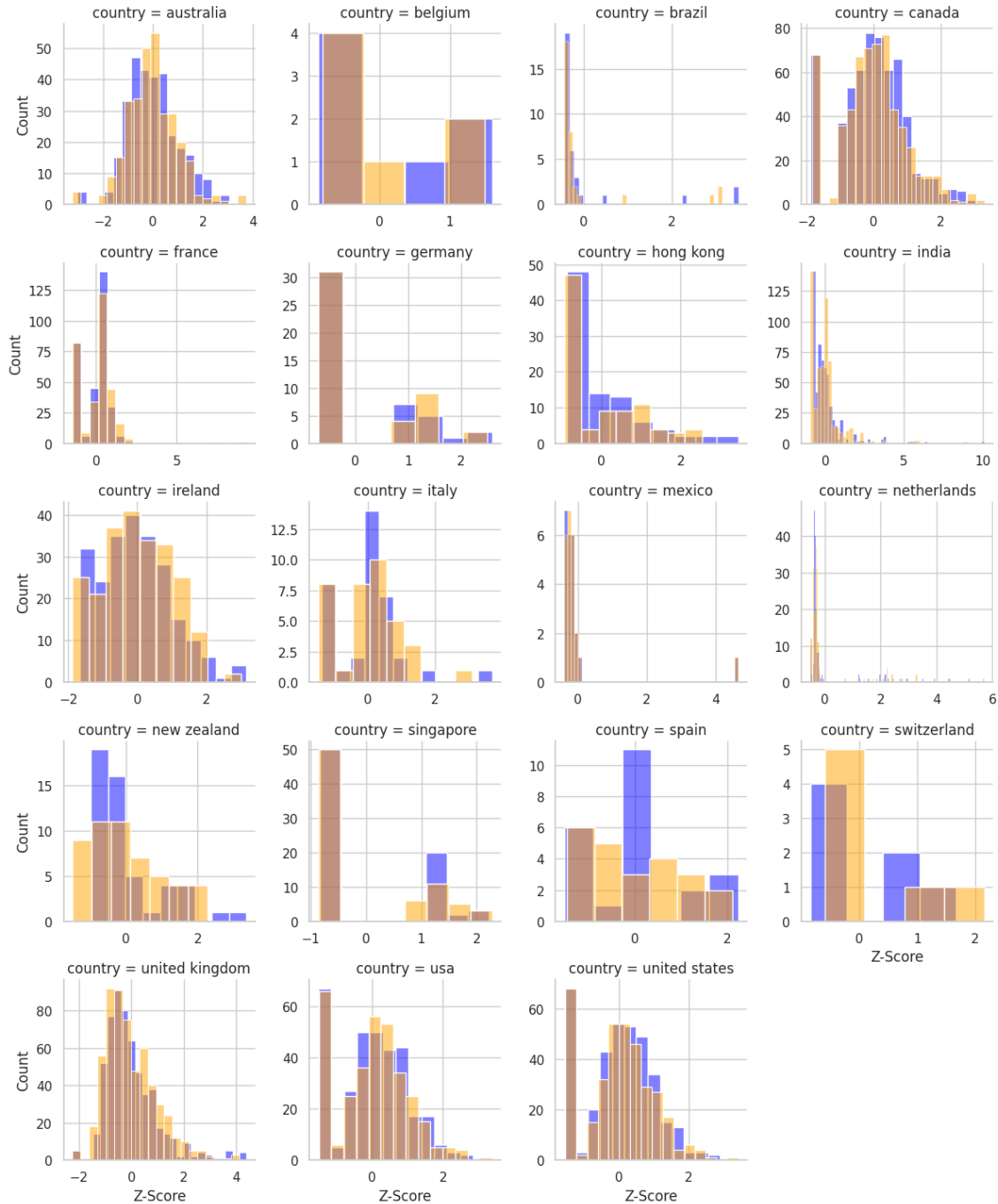
In continuation with the earlier observation we see that US has the noticable disparity on mean (min v/s max salaries) which may indicate that a lot of entry level poistions are available in US.

Job type and skills

Job description Word Cloud

The word cloud about what skills and type might be needed, words like design , leading teams , model , python , research , deep learning , innovation feature prominently in the cloud

Proportion of Remote vs. On-site Jobs

Remote

5.8%

94.2%

On-site

We see most of the jobs listed are on-site job about 94% of it , which is the right trend of 'return of office' that we see now after the covid era .

Ideal Job "Director of Data Compliance and Science"

If there is such a role, must confess that Glassdoor didn't return any valid searches ☺. Generally, *director for data* encompasses the above said role

However, as per research across web and ChatGPT suggests a prospect must have a comprehensive understanding of ***data privacy laws, including GDPR, CCPA, and HIPAA***, along with expertise in **data governance** frameworks to ensure data accuracy, security, and privacy.

They should be adept at interpreting and applying regulatory requirements to the ***company's data practices***. Proficiency in statistical analysis, predictive modeling, and machine learning is essential, along with the ***ability to clearly present insights using data visualization tools***.

Technical skills in programming languages like ***Python and R,*** familiarity with data management platforms such as ***Hadoop and Spark***, and knowledge of cloud computing platforms ***like AWS are crucial***. The role also demands a strong ***ethical awareness*** to manage data responsibly and mitigate risks, along with a commitment to continuous learning to stay updated on industry trends and evolving regulations.