LINKEDIN JOB MARKET & HIRING INSIGHTS DASHBOARD

INTRODUCTION

With the rapid growth of digital hiring platforms, LinkedIn has become one of the primary channels for job postings and talent acquisition. However, both job seekers and recruiters often struggle to extract meaningful insights from the vast volume of available job data. Information related to hiring trends, in-demand skills, salary expectations, geographic opportunities, and competition levels is scattered and difficult to interpret without structured analysis.

This project, LinkedIn Job Market & Hiring Insights Dashboard, aims to bridge this gap by analyzing LinkedIn job market data and presenting it through an interactive Power BI dashboard. By transforming raw job posting data into actionable insights, the dashboard empowers users to make data-driven career and hiring decisions. The solution focuses on uncovering market demand, skill trends, salary benchmarks,

location-based hiring patterns, and application competitiveness in a clear and intuitive manner.

PROBLEM STATEMENT

Job seekers and recruiters using LinkedIn lack clear visibility into job market trends, in-demand skills, location-based hiring patterns, and competition levels, making it difficult to make data-driven career and hiring decisions. This project aims to analyze LinkedIn job market data and develop an interactive dashboard that provides actionable insights on hiring trends, skill demand, and geographic opportunities.

EXISTING SYSTEM

- Job market analysis is mostly manual and time-consuming
- Job data is scattered across individual LinkedIn postings
- There is no centralized view of hiring trends, skill demand, or role growth
- Salary comparison across roles, locations, and industries is inconsistent
- Limited visibility into competition levels such as applications per job

TECHNOLOGY USED

EXCEL

- Initial data inspection and formatting
- Handling missing values and basic data validation

ETL (Extract, Transform, Load)

- Extracted LinkedIn job market data
- Transformed raw data into structured and analysis-ready tables
- Loaded clean data into Power BI for visualization and insights

POWER BI

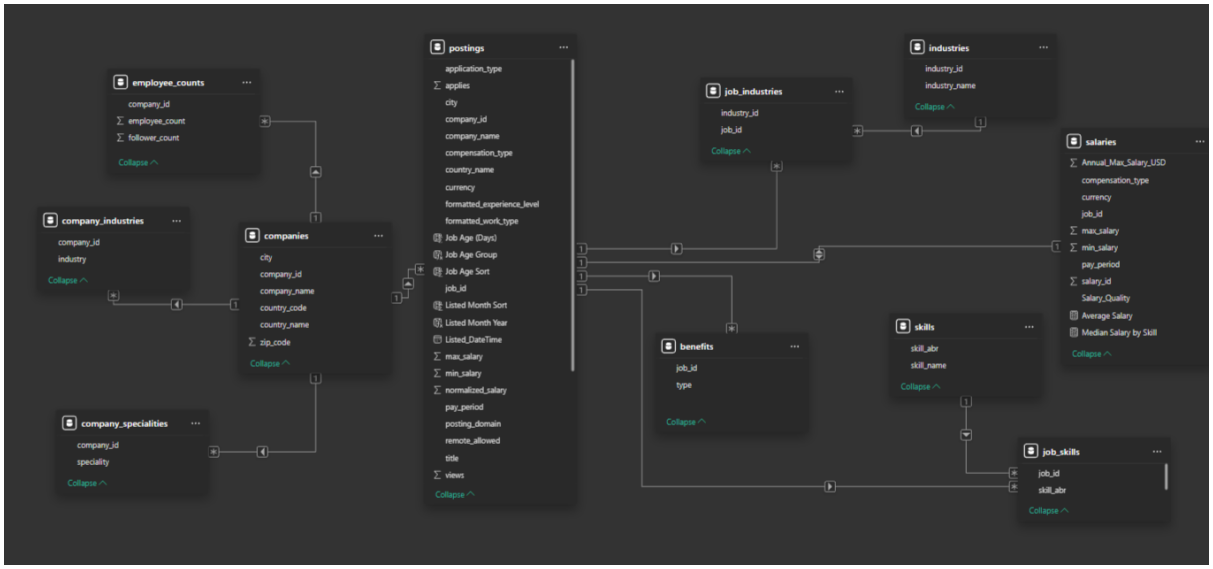
- Data modelling and relationship management
- Interactive dashboard development
- KPI cards, slicers, and visual analytics

DATA TRANSFORMATION STEPS

- Renamed columns for clarity
- Removed duplicate records
- Standardized country codes and city names
- Filtered irrelevant or incomplete rows
- Created curated city lists
- Converted data types (dates, salary, numeric fields)
- Normalized salary values to USD
- Cleaned text fields (uppercase formatting)
- These steps ensured data accuracy, consistency, and usability.

DATA MODELING

The data modelling layer forms the backbone of the LinkedIn Job Market & Hiring Insights Dashboard. A structured relational data model was created in Power BI to efficiently connect job postings with related dimensions such as companies, industries, skills, salaries, and benefits.



The model follows a **star schema–based approach**, where the **Job Postings table** acts as the central fact table and is connected to multiple dimension tables.

Key aspects of the data model include:

- Job ID used as the primary key across related tables
- One-to-many relationships between fact and dimension tables
- Separate dimension tables for companies, industries, skills, and salaries
- Optimized relationships to ensure accurate aggregation and filtering
- Improved performance and scalability for interactive analysis

QUERY QUESTIONS

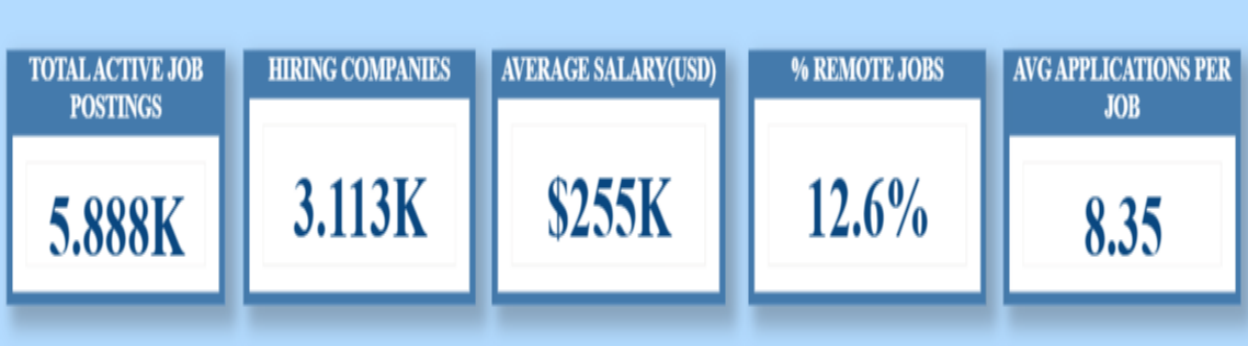
1) What is the total number of active job postings in the market?
2) How many unique companies are currently hiring?
3) What is the average salary offered across all job postings (USD)?
4) How competitive is the job market (average applications per job)?
5) What percentage of job postings are remote vs on-site?
6) Which industries have the highest number of job postings?
7) What is the monthly trend in job postings?
8) What share of job postings comes from each skill domain?
9) How does average salary vary by experience level?
10) Which cities have the most job opportunities?
11) Which companies post the most jobs?

KPI SUMMARY

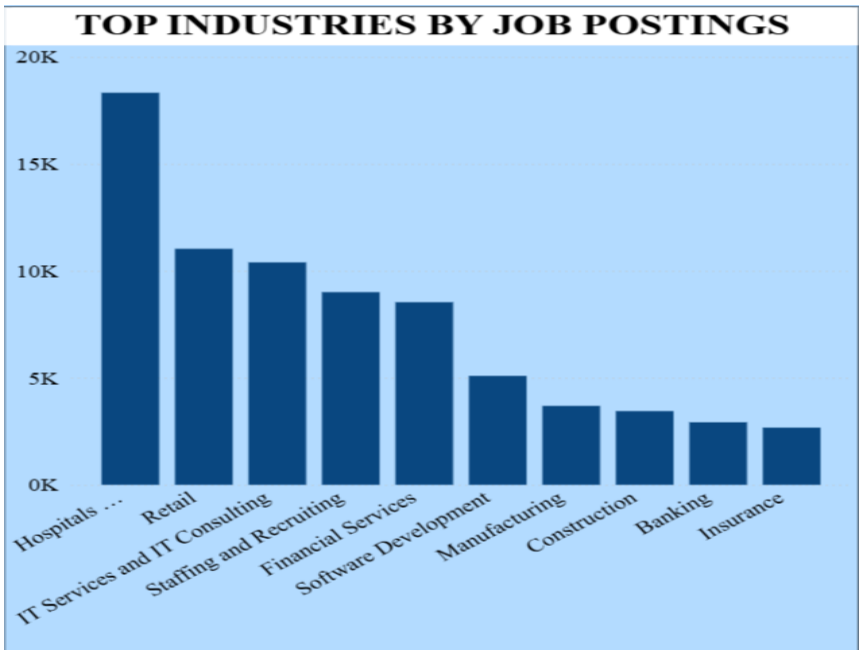
The dashboard highlights the following key performance indicators:

- Total Active Job Postings: 5.88K
- Unique Hiring Companies: 3.11K
- Average Salary (USD – annual): $255K
- Average Applications per Job: 8.35
- Remote Jobs Percentage: 12.6%

These KPIs provide a quick snapshot of the overall job market landscape and hiring trends.



CHARTS USED



Explain:

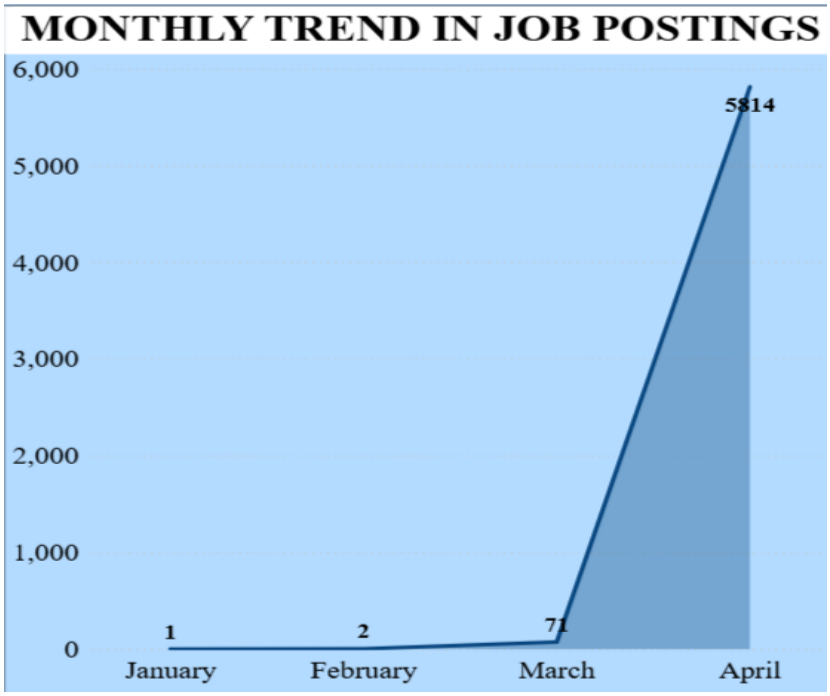
This chart displays the number of job postings across various industries, showing the distribution of hiring demand.

Why this chart:

A column chart is used because it allows easy comparison between industries and clearly highlights differences in job availability.

Insight:

Healthcare, Retail, and IT-related industries have the highest number of job postings, indicating strong hiring demand in these sectors.



Explain:

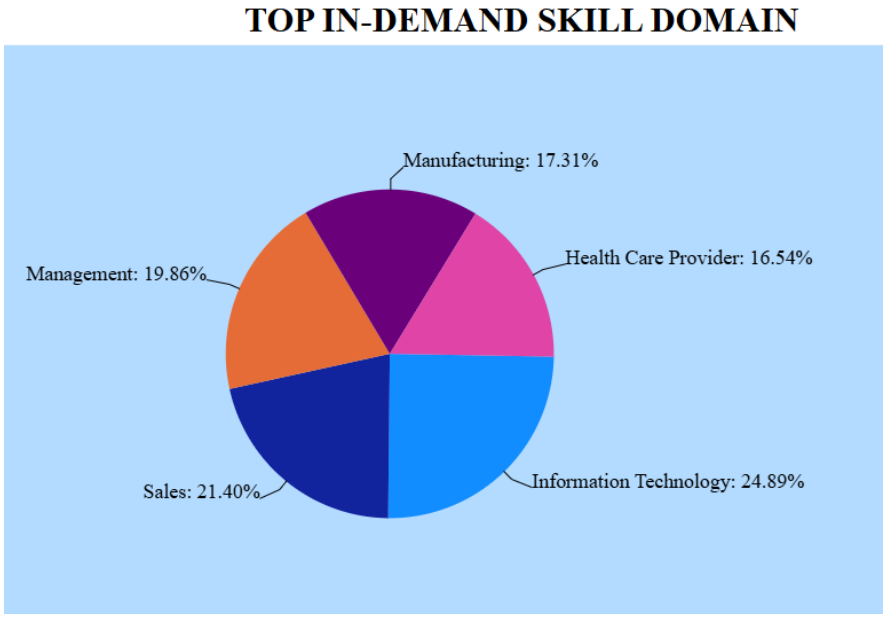
This chart shows the month-wise variation in the number of job postings over a specific time period.

Why this chart:

A line chart is ideal for time-based data as it clearly highlights trends, growth patterns, and sudden changes in job postings across months.

Insight:

Job postings remain low during January and February, show a slight increase in March, and then rise sharply in April, indicating a significant surge in hiring activity.



Explain:

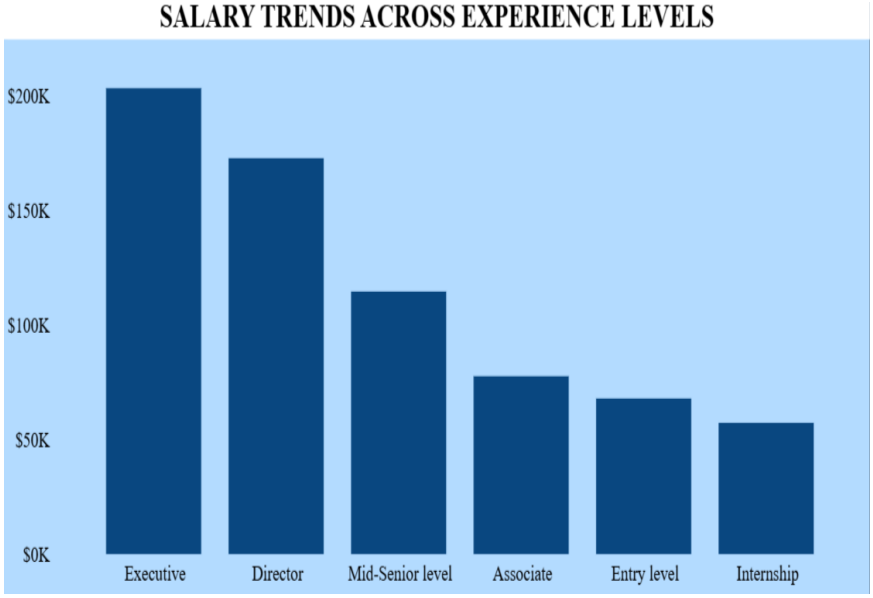
This chart shows the percentage distribution of job demand across different skill domains such as Information Technology, Sales, Management, Manufacturing, and Healthcare.

Why this chart:

A pie chart is used to represent part-to-whole relationships. It helps clearly show how overall skill demand is divided among various domains.

Insight:

Information Technology leads skill demand, followed by Sales and Management, with steady demand across other domains.



Explain:

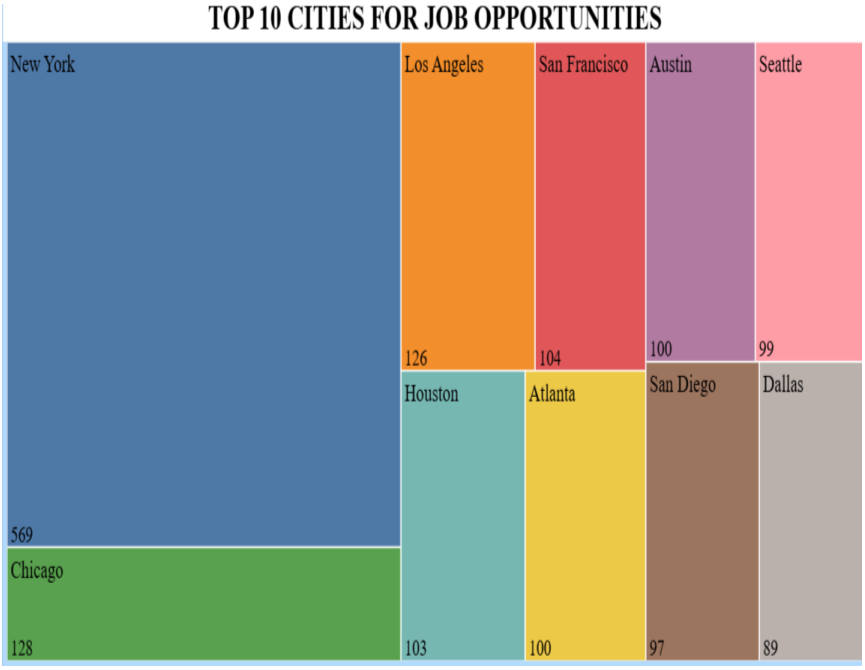
This chart shows the average salary offered across different experience levels, ranging from internship to executive roles.

Why this chart:

A bar chart is effective for comparing salary levels across experience categories, making differences in compensation easy to understand.

Insight:

Salaries increase significantly with experience, with executive and director roles earning the highest pay, while entry-level and internship roles receive comparatively lower salaries.



Explain:

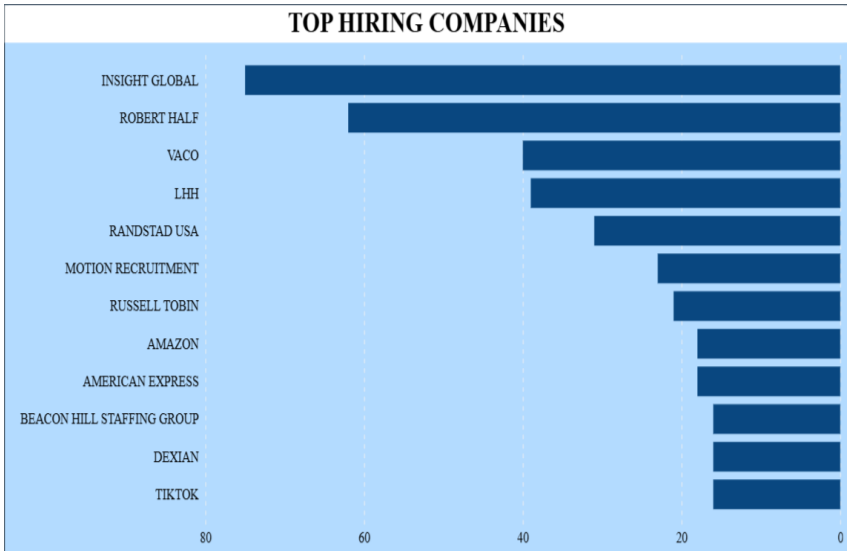
This treemap visualizes the distribution of job opportunities across the top 10 cities, where the size of each block represents the number of job postings.

Why this chart:

A treemap is used to compare multiple categories in a limited space. It effectively highlights cities with higher job availability while showing relative differences among all top cities.

Insight:

New York has the highest number of job opportunities by a large margin, followed by Chicago and Los Angeles, indicating that major metropolitan cities dominate the job market



Explain:

Displays the top hiring companies, where bar length indicates the total number of job postings and companies are ranked from highest to lowest.

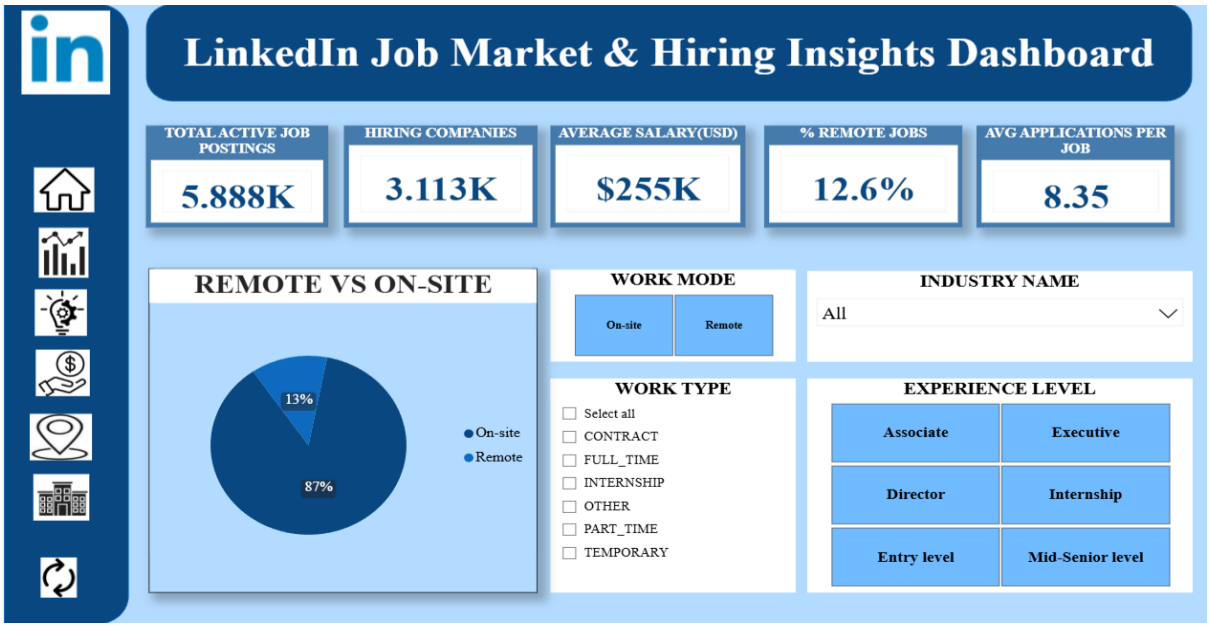
Why this chart:

A horizontal bar chart allows quick comparison, clear ranking, easy readability of long company names, and highlights hiring differences effectively.

Insight:

Insight Global leads hiring, followed by Robert Half. Staffing and recruitment firms dominate the top positions, showing they generate most job opportunities, while direct employers have comparatively lower hiring volumes.

DASHBOARD OVERVIEW



CONCLUSION

The **LinkedIn Job Market & Hiring Insights Dashboard** successfully addresses these challenges by converting complex job market data into a unified, interactive analytics solution. By leveraging Power BI's data modeling and visualization capabilities, the dashboard provides clear insights into hiring trends, skill demand, salary benchmarks, geographic opportunities, and competition levels.

This project enables job seekers to make informed decisions about where to apply and which skills to develop, while helping recruiters and hiring managers optimize sourcing strategies and

understand market dynamics. Ultimately, the dashboard demonstrates how data analytics can transform raw job market data into actionable intelligence, supporting smarter, faster, and more strategic career and hiring decisions.