

# DECODING TECH HIRING TRENDS: A KEYWORD ANALYSIS OF LINKEDIN JOB POSTINGS

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# Why This Topic?

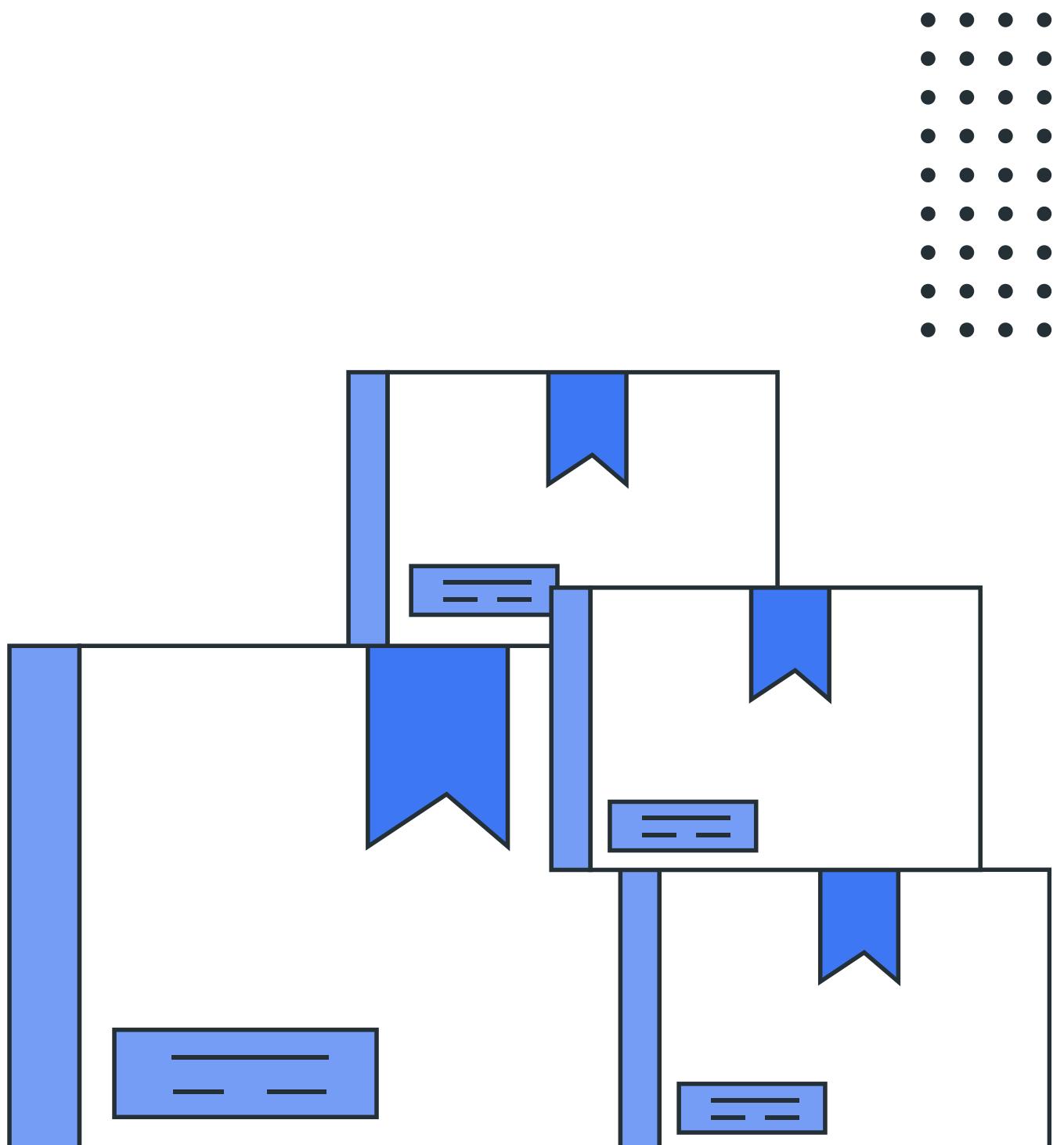
- The tech job market is highly competitive and rapidly evolving
- Job postings signal **what skills employers value in real time**
- Students rely on these implicit signals when choosing majors, courses, and career paths
- Research exists on **labor trends**, but less on *fine-grained, role-specific skill keywords*





# Implications For Stakeholders

- Students / Job Seekers:** Identifies high-demand skills for prioritizing learning
- Employers:** Benchmark skill requirements against competitors
- Universities:** Helps align curriculum with industry needs
- Researchers:** Contributes to empirical labor market analytics



# Identify which skills and qualifications appear most frequently in tech job postings, and how they vary by role

- Which keywords are most common across CS/data roles?
- How do requirements differ between Data Analyst vs. Data Scientist vs. Software Engineer?
- Are there emerging tools or skills trending upwards?

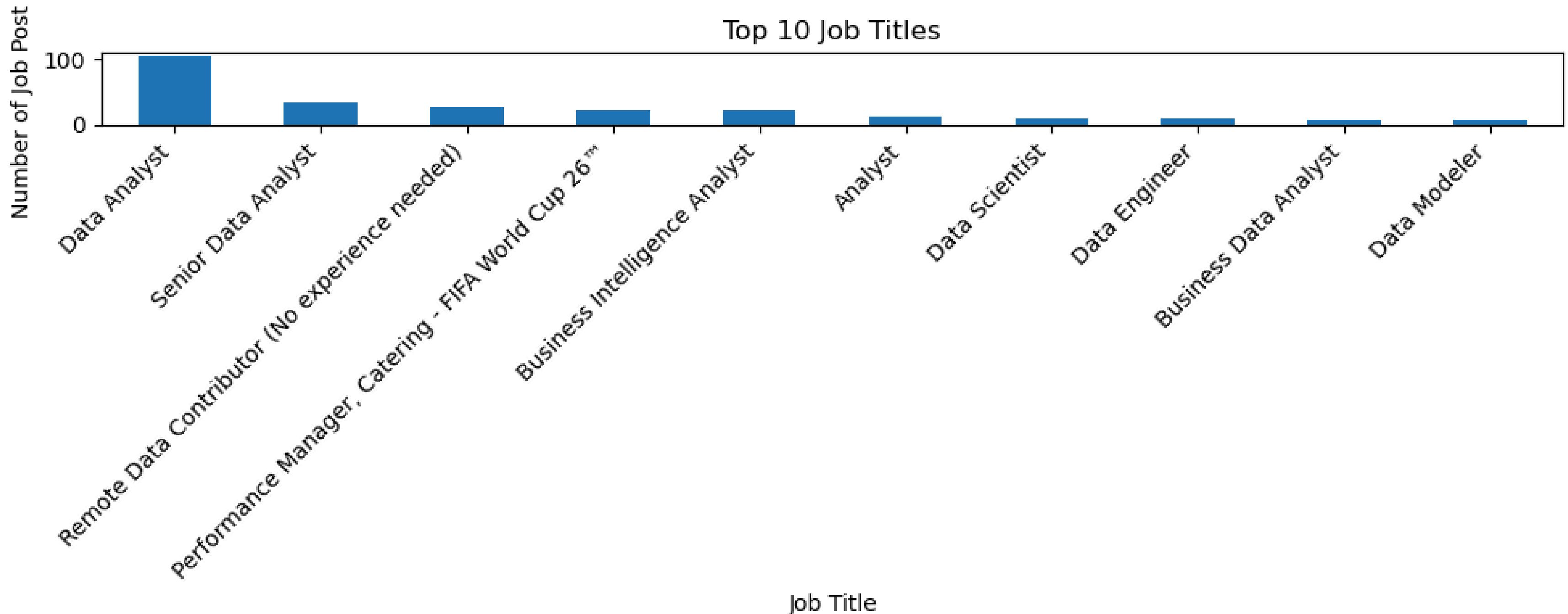
# Our Dataset

Source: LinkedIn job postings  
Method: Web scraping  
Scope:

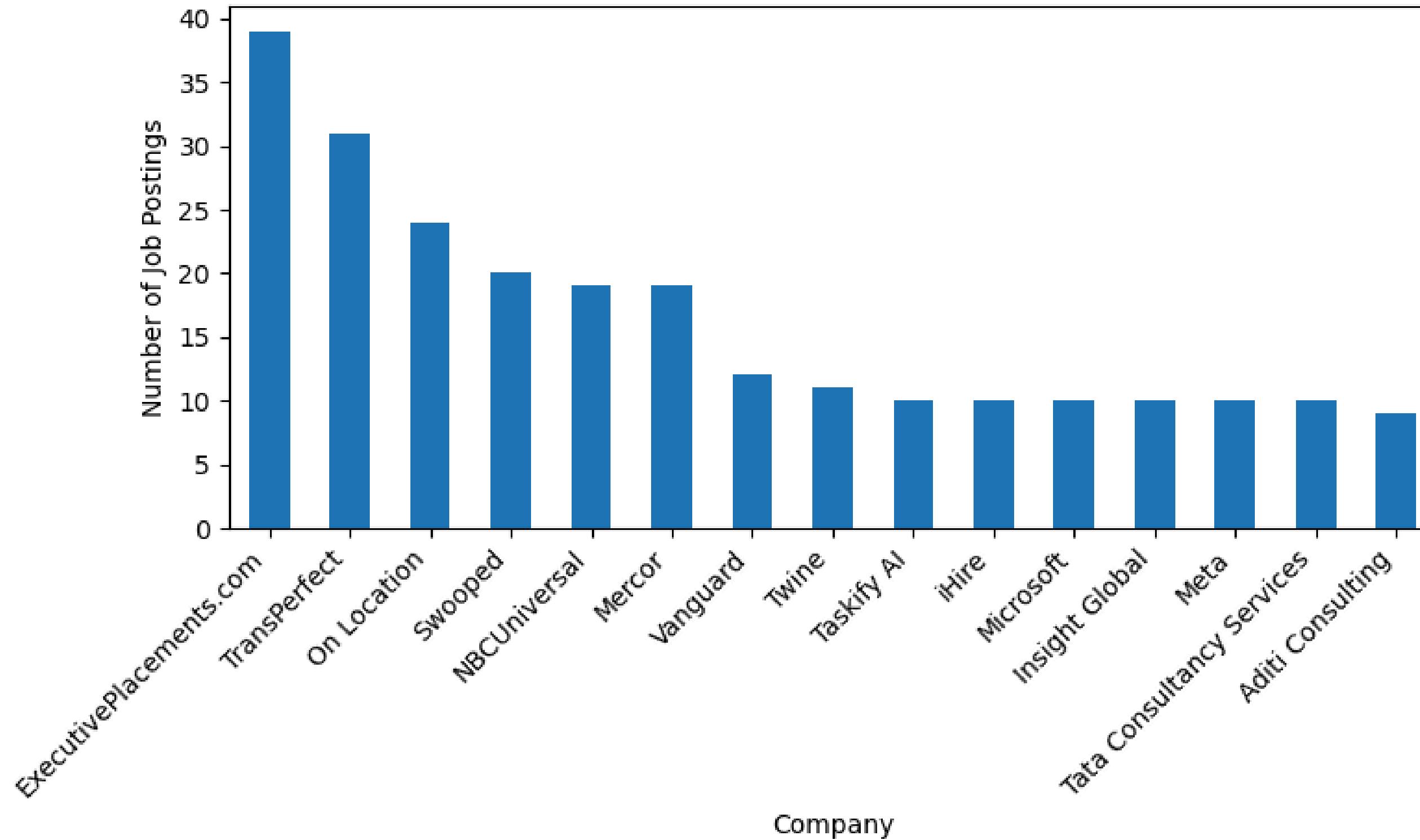
- Platform: LinkedIn
- Region: US
- Roles scraped: Data Science / Data Analyst

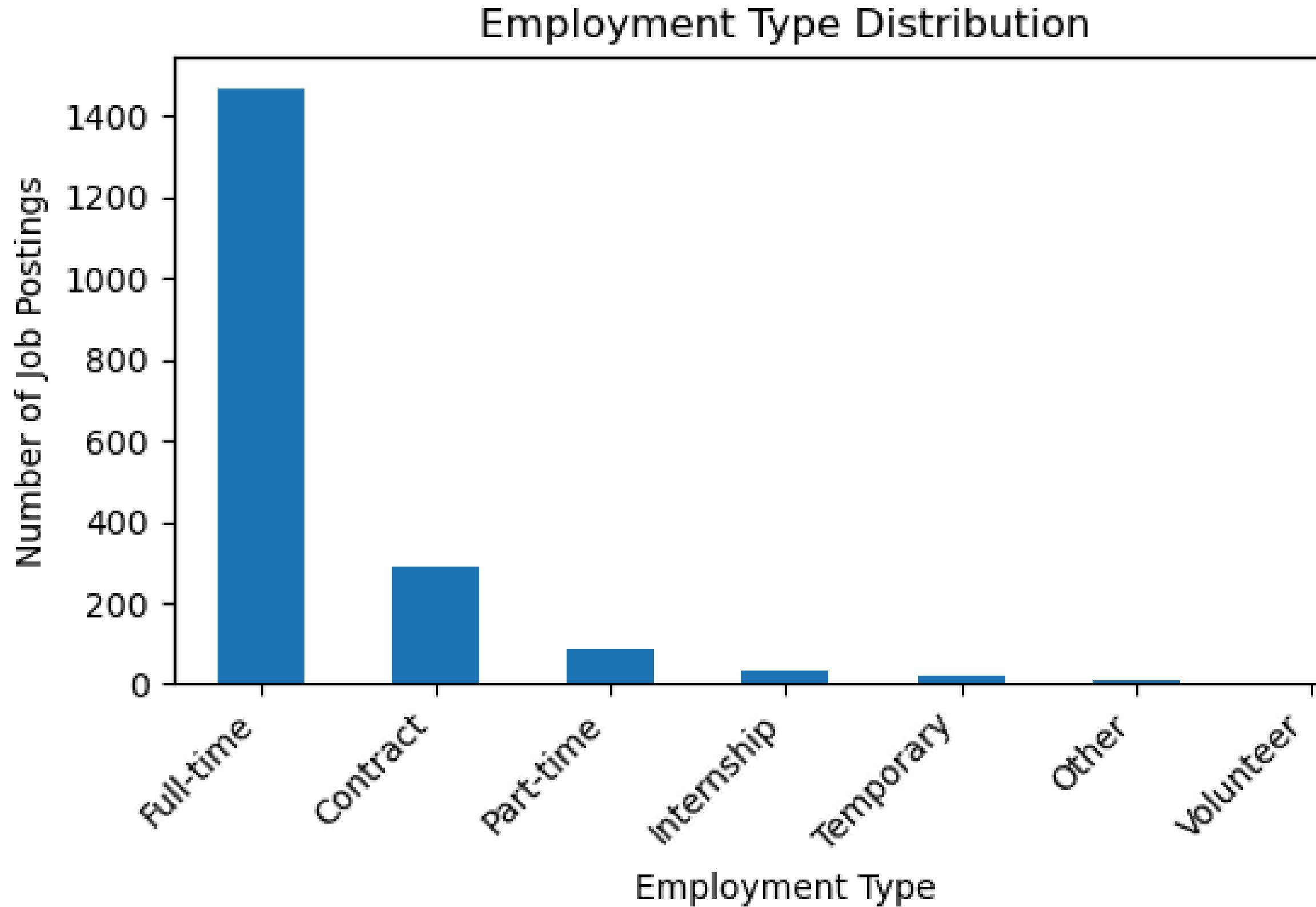
- Initially had 3778 observations and 34 variables
- Final dataset significantly refined (to 1909 observations) due to significant number of duplicates
- Removed 10 variables

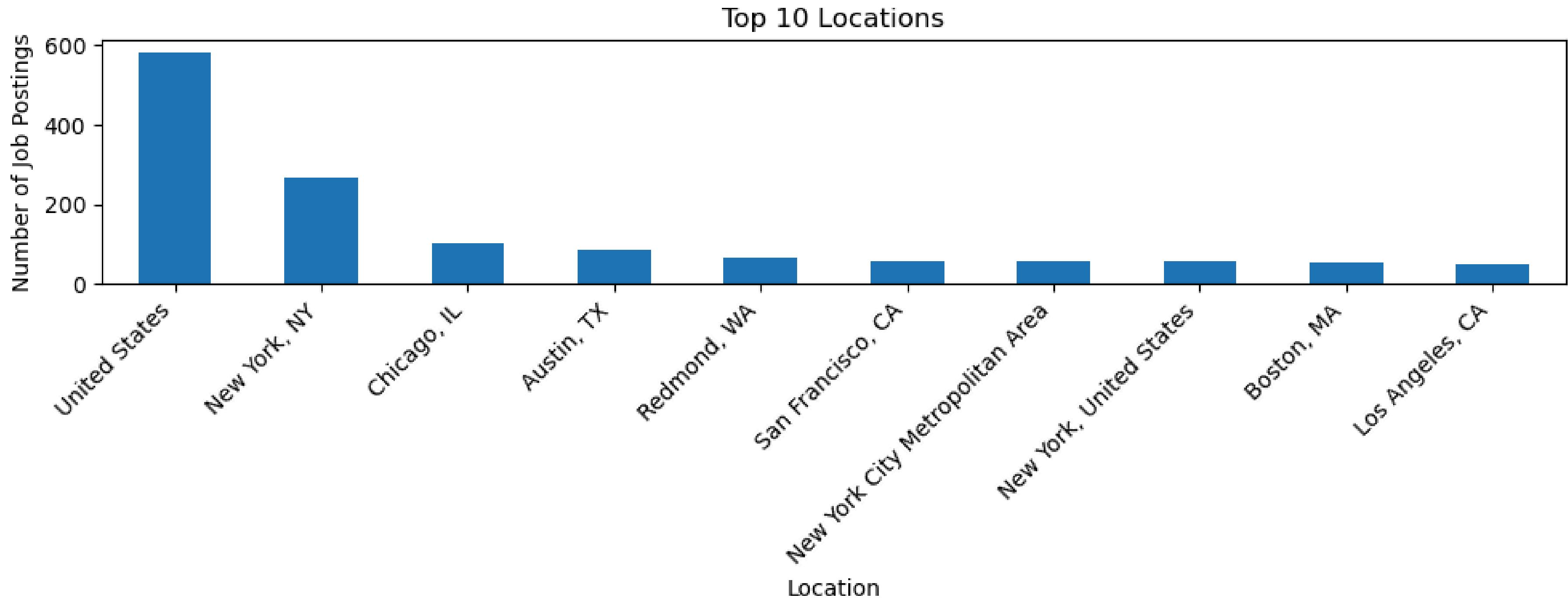


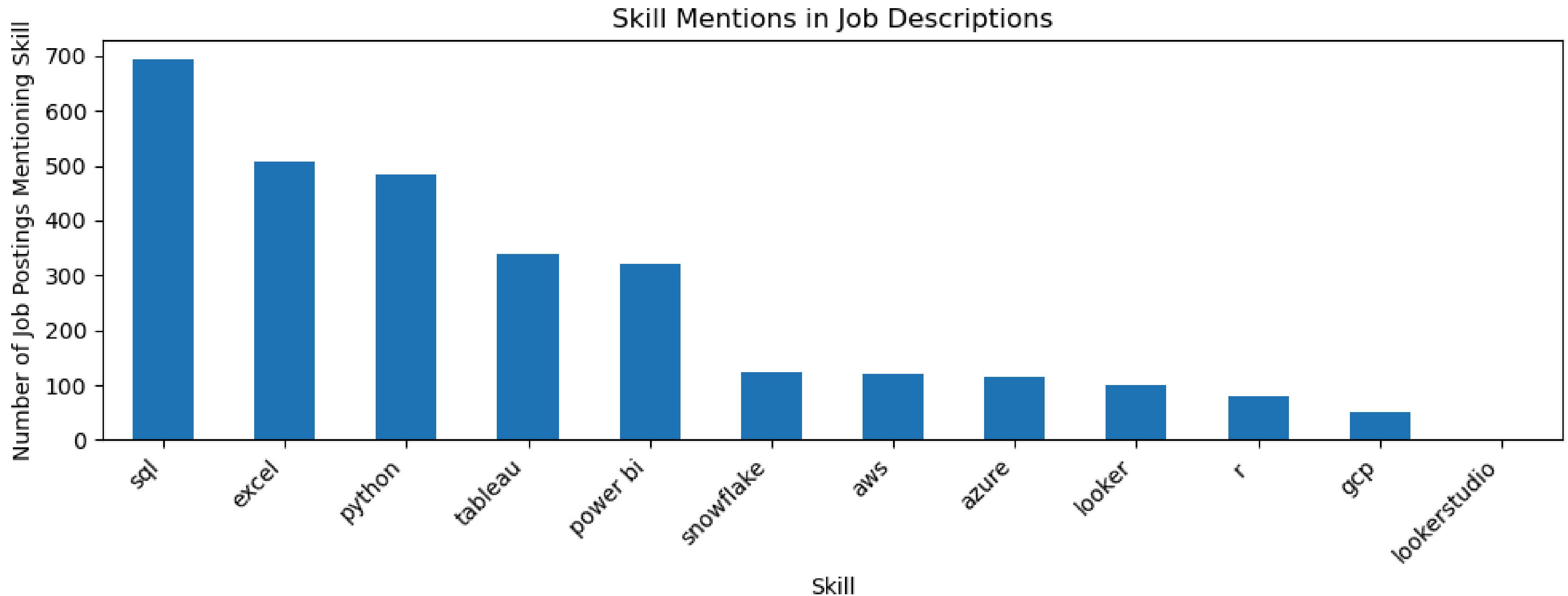


## Top 15 Hiring Companies







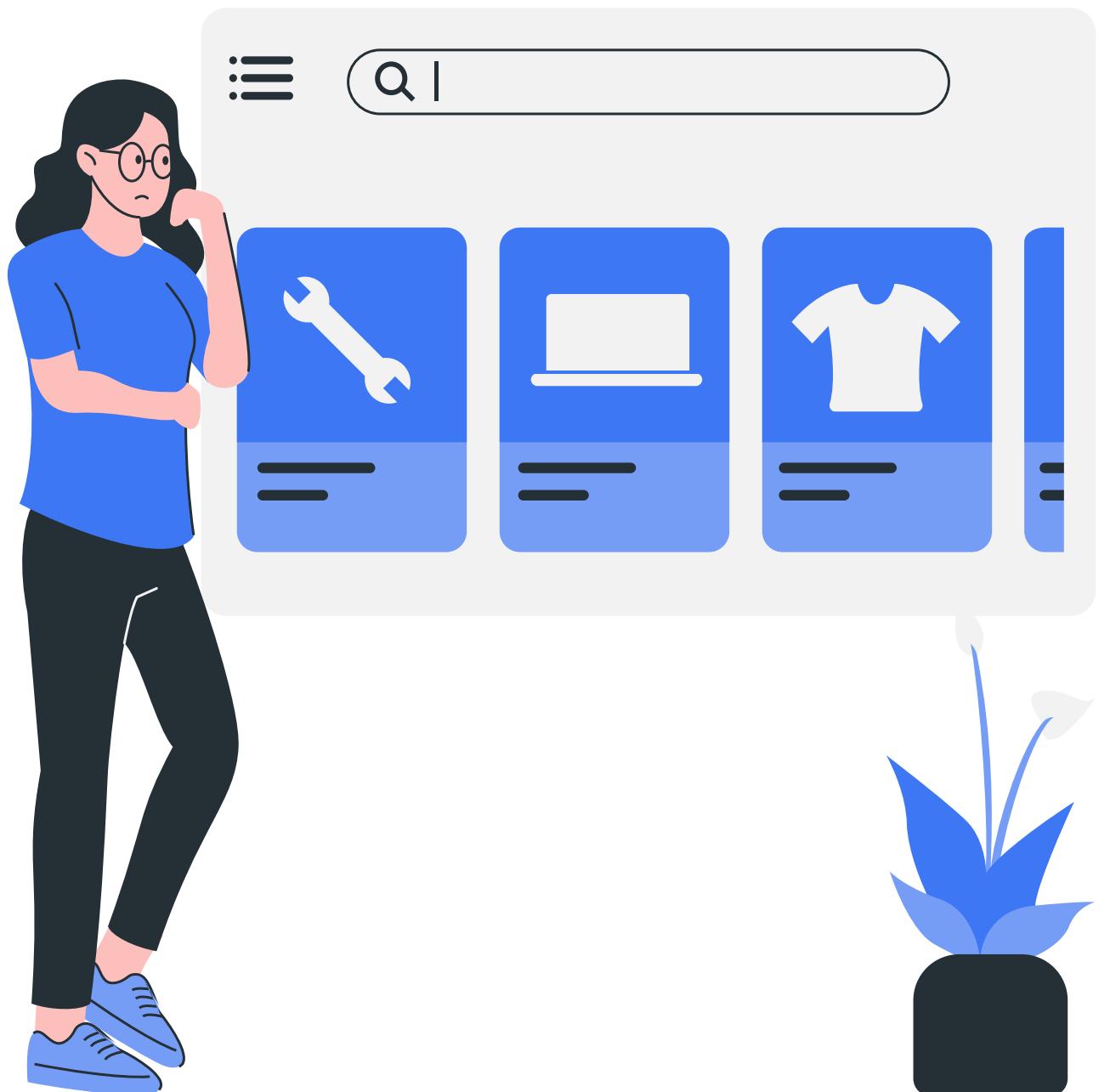




# Ethical & Legal Implications

- Respecting platform terms. Used for research purpose only
- Treat data as aggregate. Avoid quoting postings or identifying employers
- Include bias analysis, acknowledge systemic hiring patterns
- Transparency in methodology: document every steps, assumptions, and limitations





# Plan For Next Weeks

- ▶ More web scraping for a bigger dataset
- ▶ Data cleaning and text processing
- ▶ Clustering, topic modeling
- ▶ Output: word clouds, bar chart of top skills, cluster heatmap, geographic filtering

# Thank You For Listening

