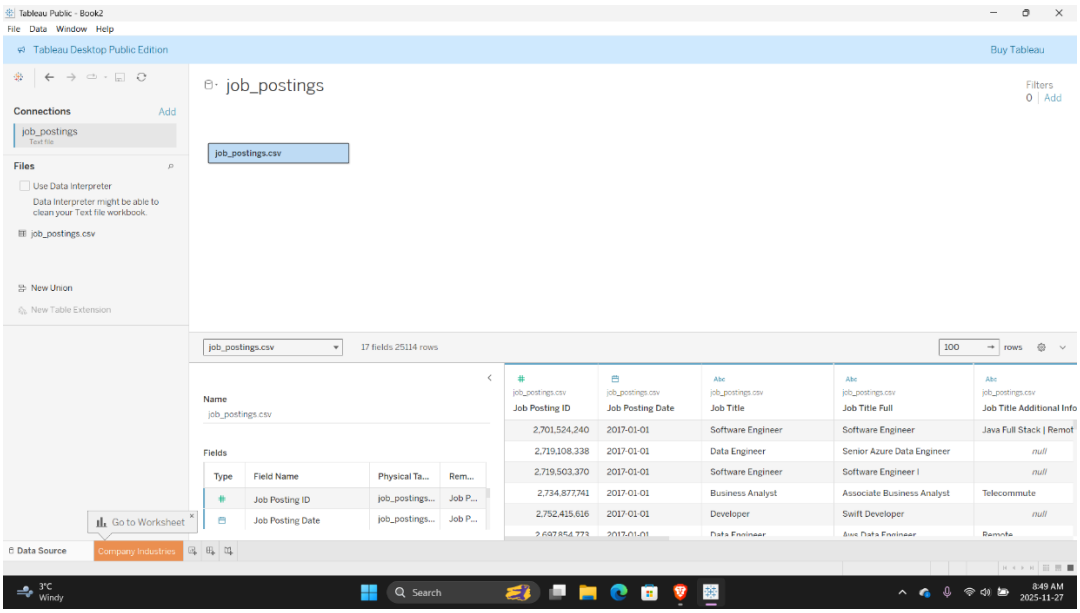
Job Market Analysis
Case Study

Objective:

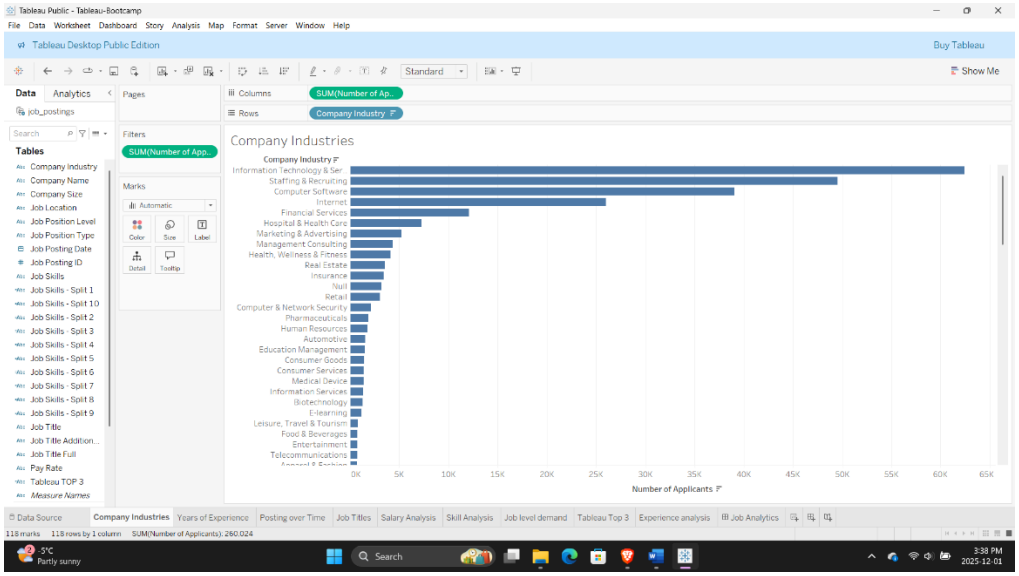
Analyze current job market trends to identify in-demand skills, roles, and salary patterns, and present key insights through interactive Tableau visualizations to support informed decisions.

- Load the data
  Import the dataset into Tableau by connecting to the CSV file, and verifying field types once connected.



1. Company Industries

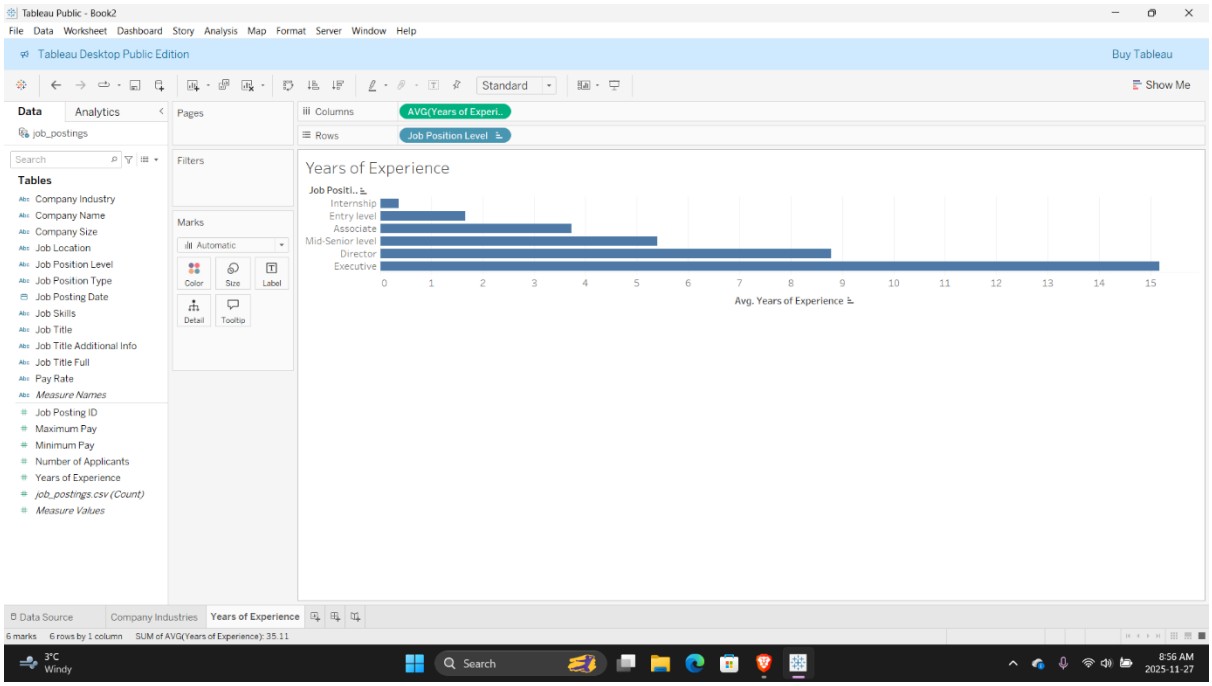
- Row: SUM(Number of Applicants)
- Column: Company industry
- Visual: Horizontal Bar chart



Analysis:

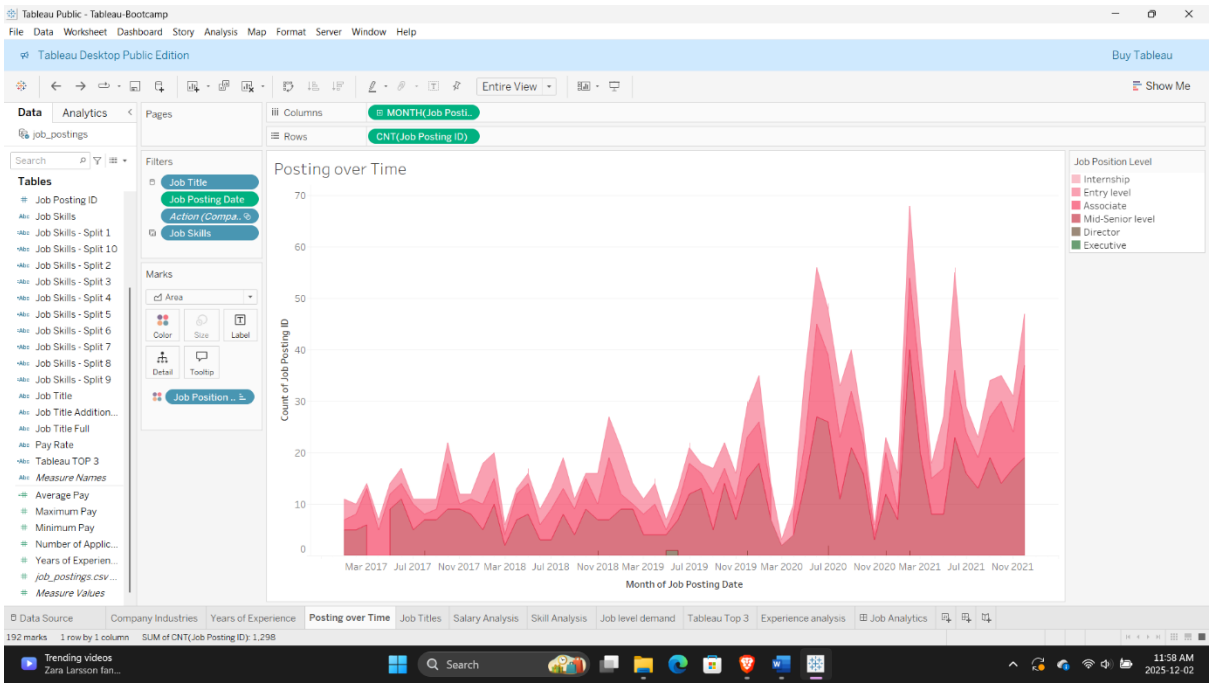
- There are 118 distinct industries
- Computer Software is the 3rd most popular industry
- Information Technology & Services attracts the highest number of applicants by a significant margin, followed by Staffing & Recruiting and Computer Software.
- Technology-driven industries have the majority of applicants in the current job market.

2. Years of Experience
    - Column: AVG(Years of Experience)
    - Row: Job Position Level
    - Chart: Horizontal Bar Chart



3. Job Postings over time

- Column: MONTH(Job Posting Date)
- Row: CNT(Job Posting ID)
- Chart: Area Chart
- Color by: Job Position Level

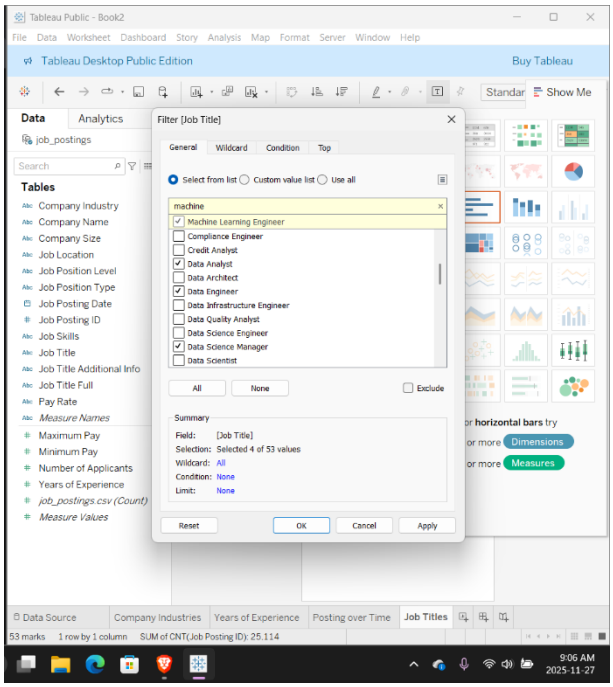


Analysis:

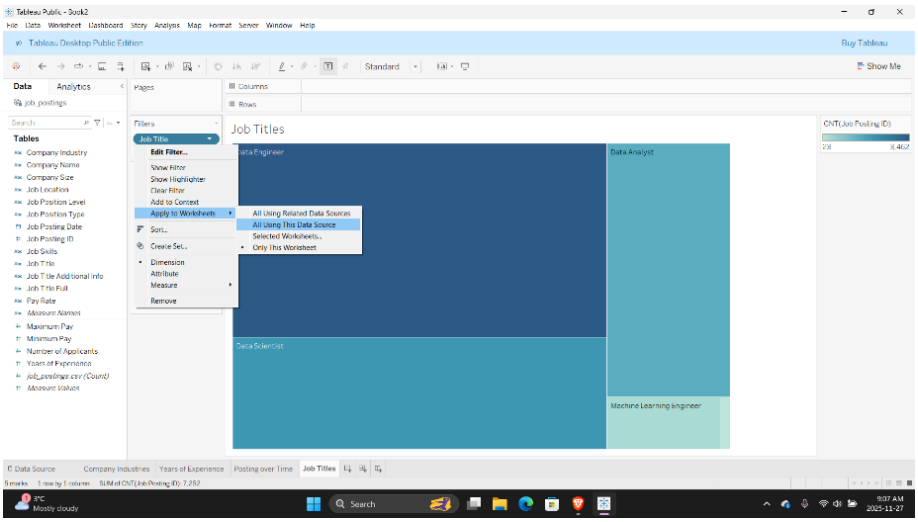
- Job postings show an upward trend from 2016 to 2022, indicating growing hiring activity over time.
- Entry-level and Associate roles show the strongest demand
- Mid-Senior level roles show steady but moderate activity across the timeline
- Director and Executive roles remain low, indicating limited demand for higher-level positions
- Overall, the data reveals a growing job market, driven mainly by junior and mid-level hiring.

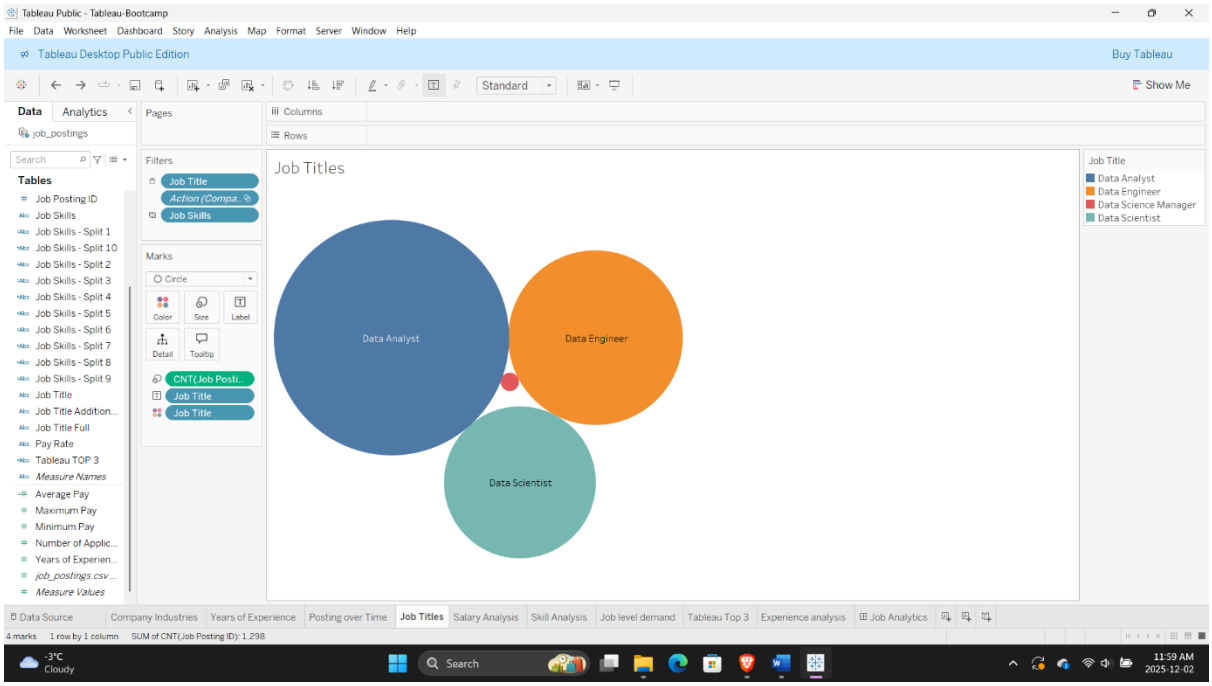
4. Filtering of Job titles

- Chart: Bubble Chart
- Size: CNT(Job Posting)
- Color: Job Title
- Text: Job Title
- Filter: Job Title to show 5 jobs of interest



- Applying Job Title filter to all Worksheets





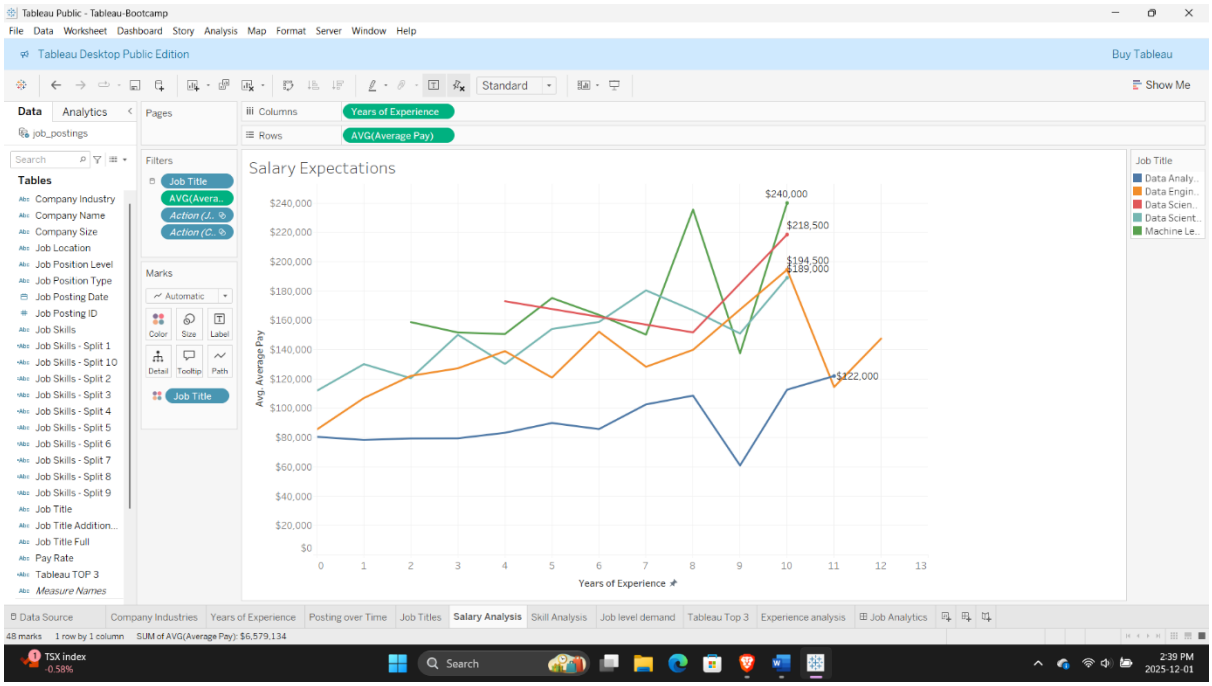
Analysis:

- Data Analyst has the largest bubble, showing it has the highest number of job postings among all titles in the dataset
- Data Scientist and Engineer appears with a noticeably smaller bubble, suggesting fewer opportunities compared to more general data roles.
- Data Science Manager shows the smallest bubble, reflecting limited openings for managerial or senior-level data positions

5. Salary Analysis
    - Create a calculated field to calculate average pay:

```
([Maximum Pay]+ [Minimum Pay])/2
```

- Columns: Years of Experience
- Row: AVG(Average Pay)
- Color: Job Title
- Chart: Line chart

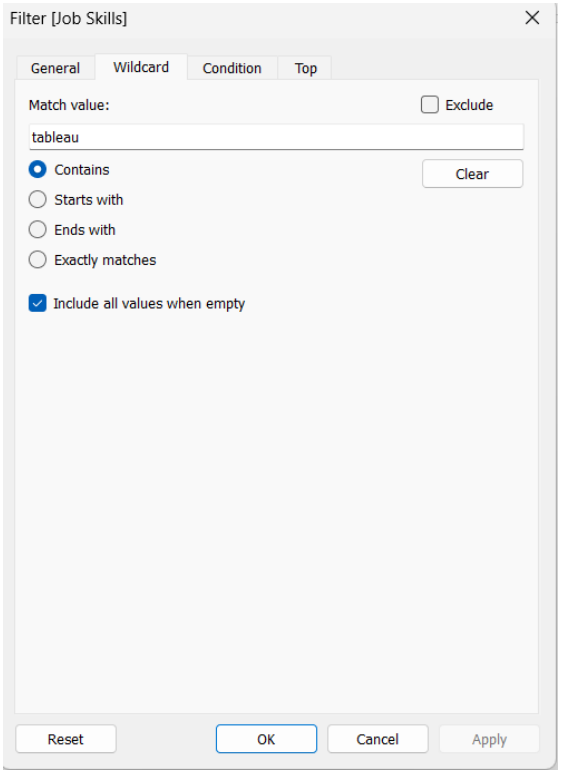


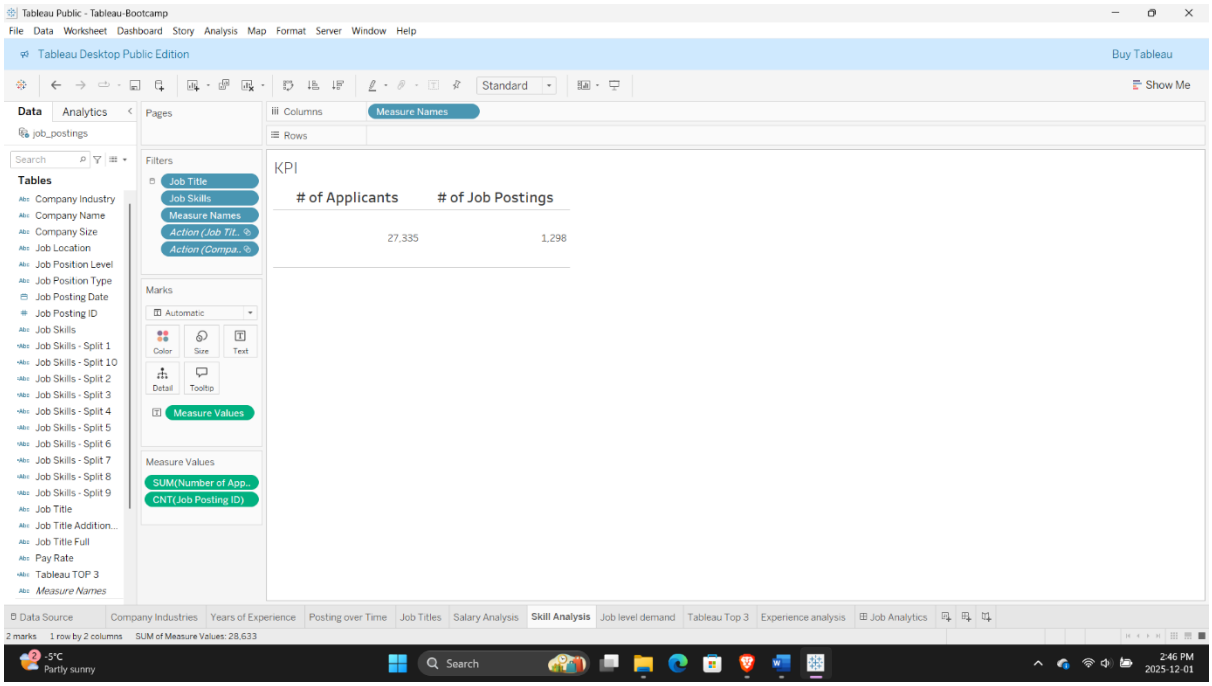
Analysis:

- Data Analysts have the lowest pay growth; growing slowly from $80k to $122k
- All Salaries increase with years of experience across all roles
- Machine Learning Engineers have the highest salaries, peaking around $240k.
- Data Scientists and Senior Data Scientists earn higher salaries overall, often between $150k–$200k
- Average salary of a Machine Learning Engineer is $235,500

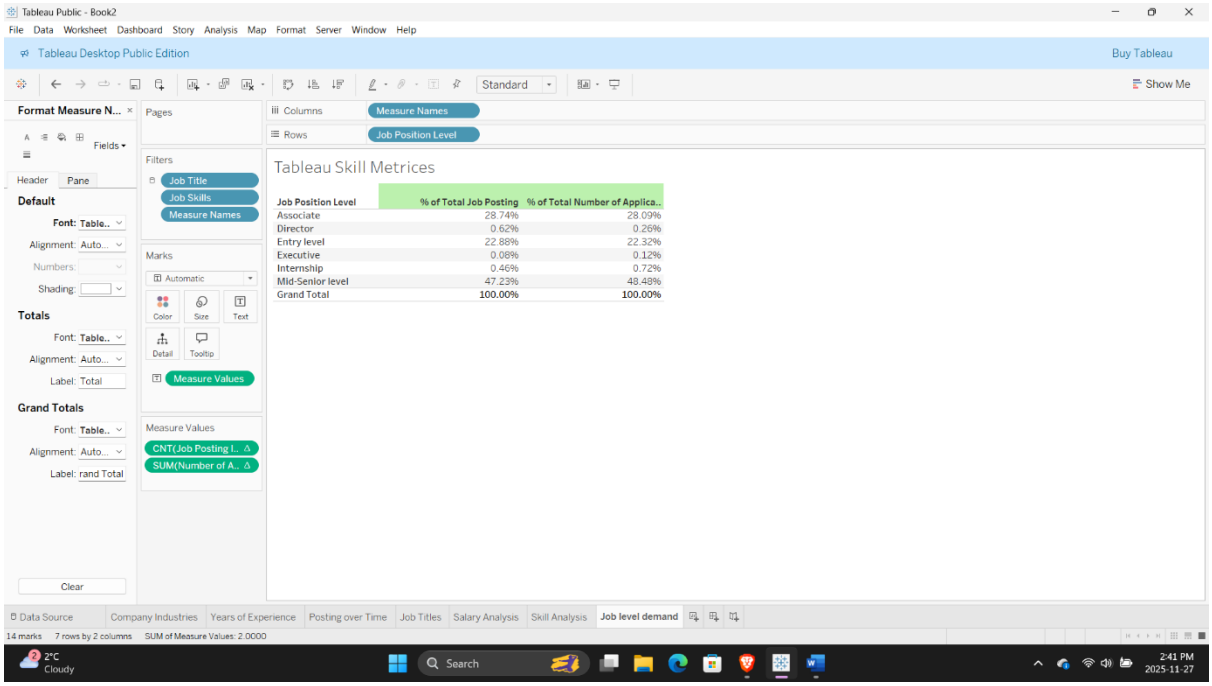
6. Job Skill Experience

- Chart: Table Visual
- Column: SUM(Number of Applicants), CNT(Job Posting ID)
- Filter: Job Skills, Job Title





7. Tableau Demand VS Supply by Experience Level (In Percentage)
    - Columns: CNT(Job Posting ID), SUM(Number of Applicants)
    - Rows: Job Position Level
    - Filter: Job Title, Job Skills

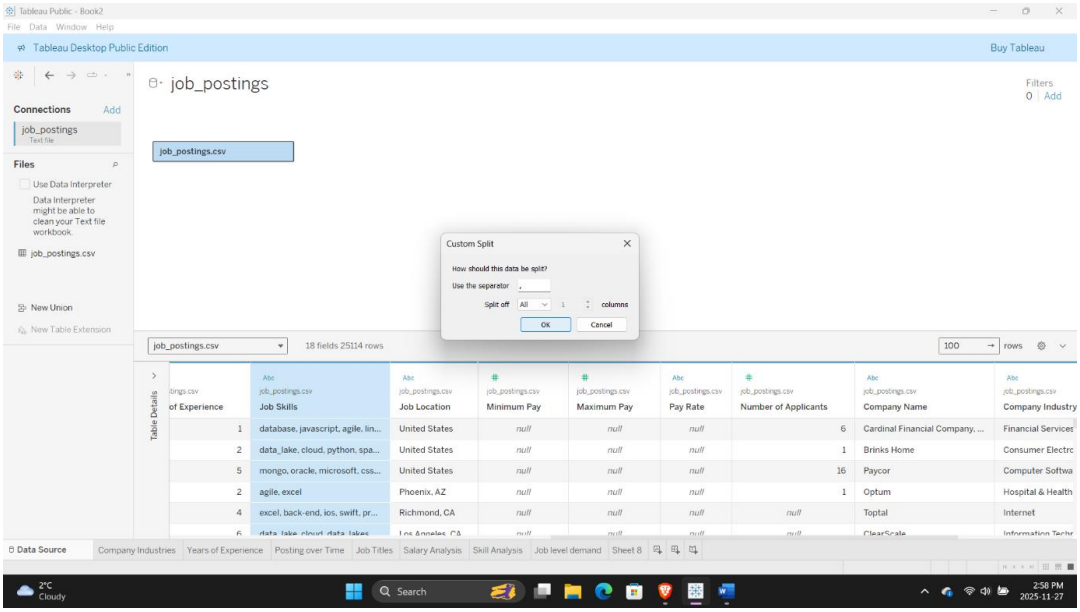


Analysis:

- The job market is dominated by Mid-Senior level roles, making up 47.23% of total job postings and 48.48% of total applicants, suggesting companies prefer experienced professionals.
- Entry and Associate-level jobs still represent a strong share, supporting early-career opportunities.
- High-level leadership roles (Director/Executive) are scarce, which is normal for most industries.

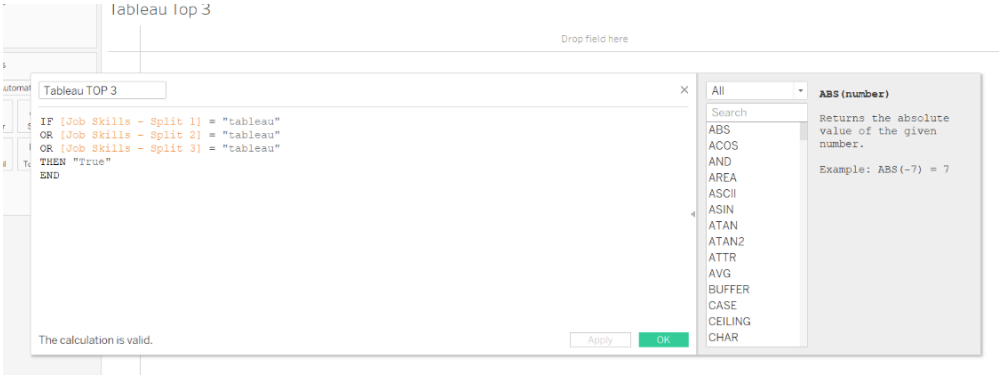
8. Job Skills: To gain insights on job posts that have Tableau as their top 3 skills

- In the Data Source Tab, select the Job Skills column and split the column by delimiter ‘,’ so that each individual job skill is in a separate column

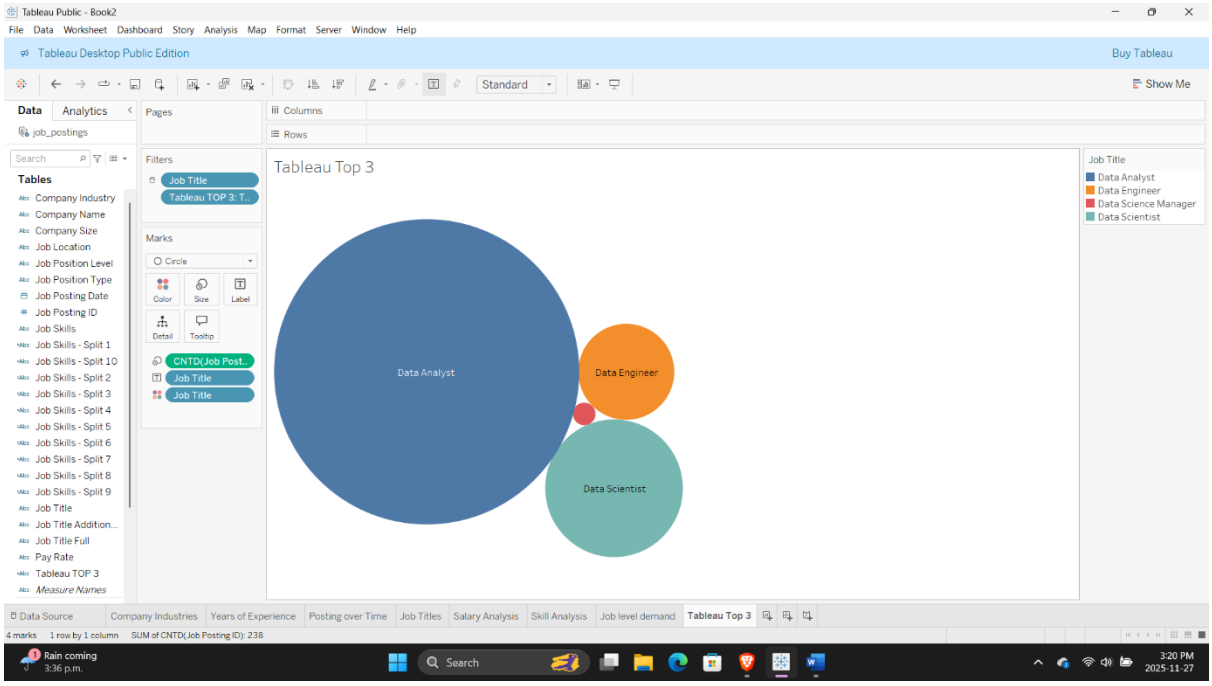


- Create a calculated field that checks if ‘tableau’ is listed in either the first, second, third split job Skills column

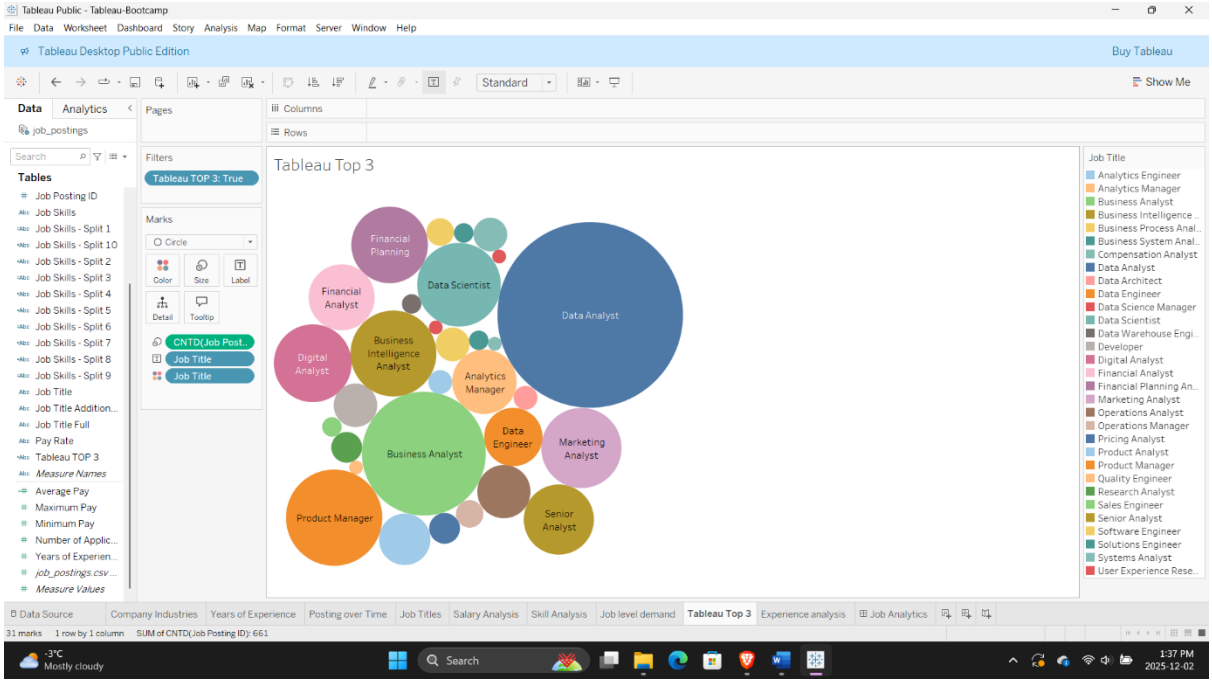
```
IF [Job Skills - Split 1] = "tableau"
OR [Job Skills - Split 2] = "tableau"
OR [Job Skills - Split 3] = "tableau"
THEN "True"
END
```



- Chart: Bubble Chart
- Size: CNTD(Job Posting ID)
- Text: Job Title
- Color: Job Title



- Visual without the Job Title filter applied

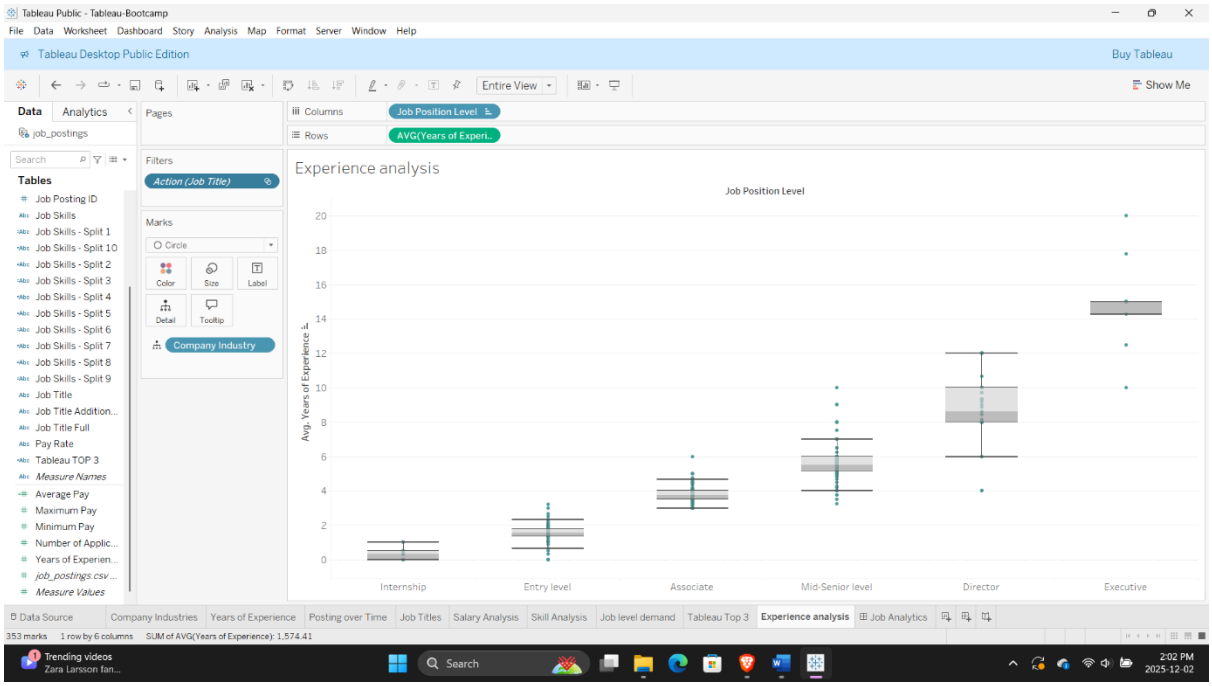


Analysis:

- Data Analyst is the job title that most frequently lists Tableau as a required skill
- Moderate bubble size for Data Scientist shows Tableau is important, but not as central as for Data Analysts.
- Business Analyst, Business Intelligence Analyst, Marketing Analyst, and Financial Analyst emerge as large bubbles, showing strong usage of Tableau across business and strategic roles.

9. Job Experience Analysis: a visualisation that shows the average age of experience by job position level, aggregated by company industry, using box plot.

    - Column: Job Position Level (sorted in ascending order)
    - Row: AVG(Years of Experience)
    - Detail: Company Industry

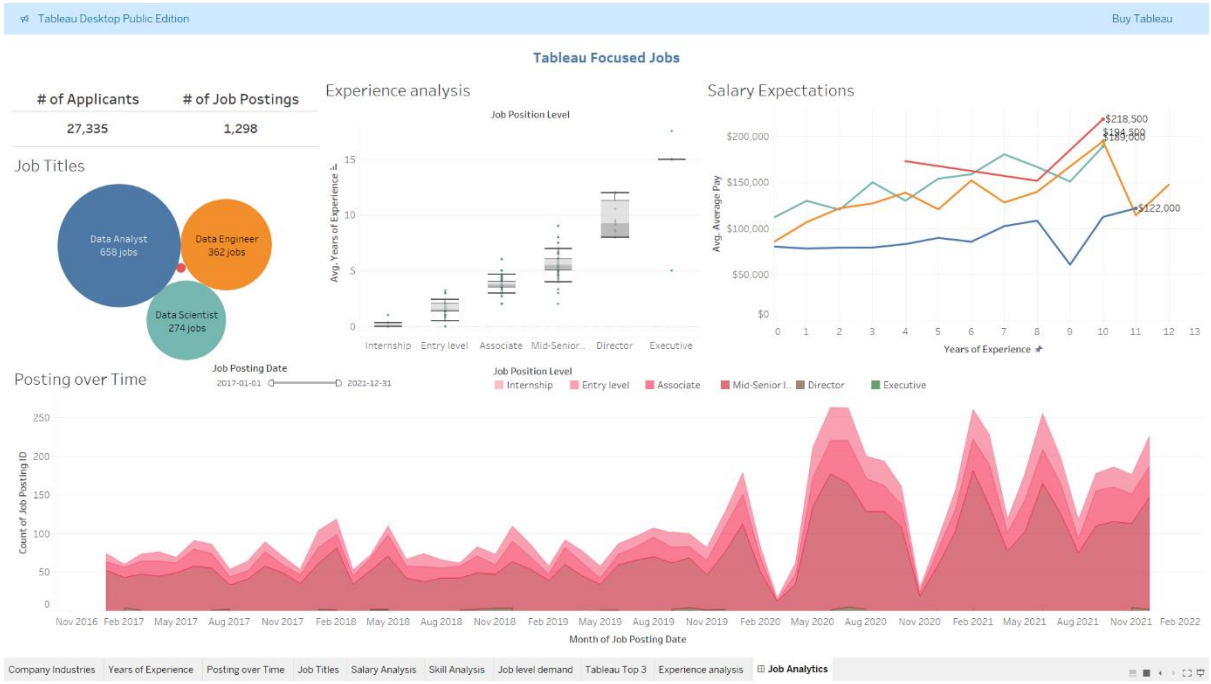


Analysis:

- Experience requirements increase consistently from one job level to the next.
- Variability grows as roles become more senior.
- Lower levels (Internship, Entry, Associate) have tight, predictable ranges.
- Higher levels (Mid-Senior, Director, Executive) show broader and higher ranges, reflecting leadership expectations.

Dashboard:

- All visuals are strategically arranged to make efficient use of space and maintain a clean, readable layout.
- Consistent formatting, spacing, and color usage help maintain visual coherence across all charts.
- The job title bubble chart and Job position level chart both function as an interactive filter



Conclusion:

Using Tableau, this dashboard brings together job titles, skill requirements, experience levels, and market demand into one interactive and visually cohesive view. The dynamic filters and well-structured layouts make it easy to explore how different roles vary in expectations and opportunities. Overall, it offers a clear understanding of the job landscape and serves as a valuable tool for those looking to gain insight into hiring trends.