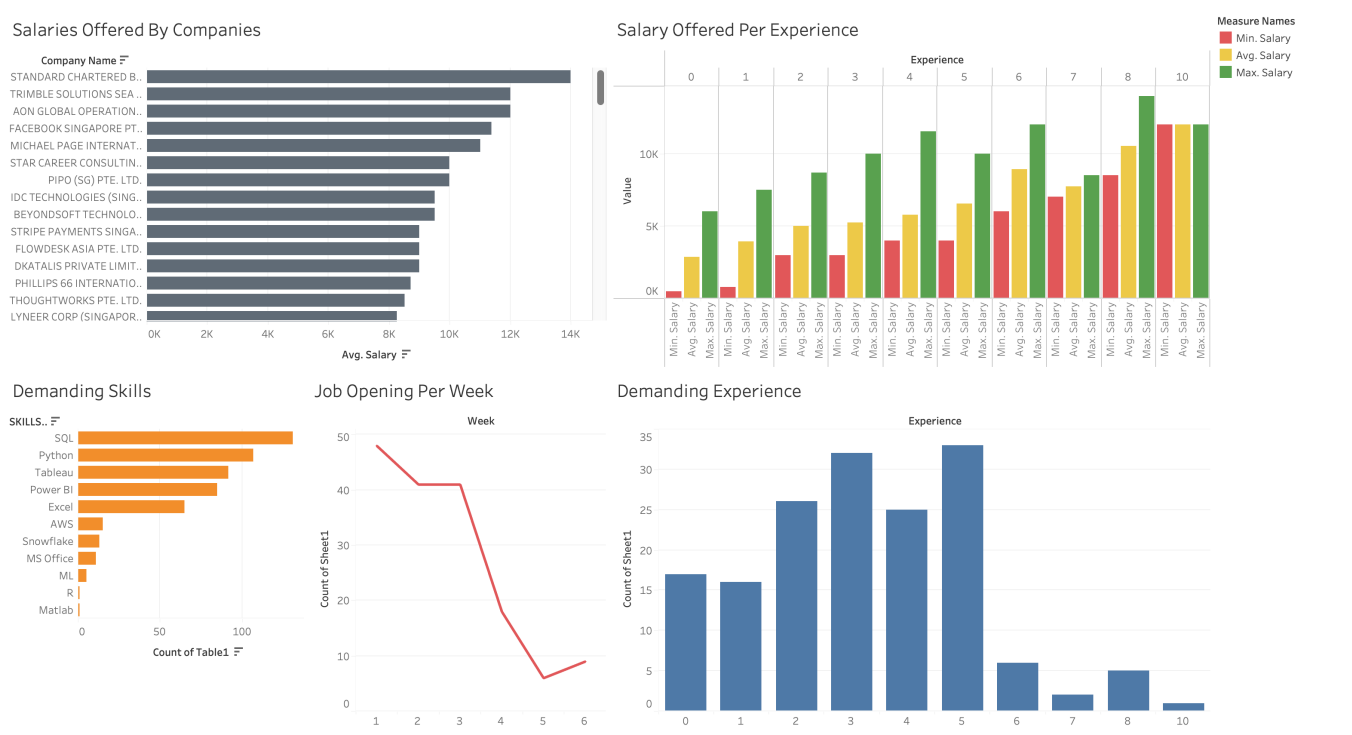




Data Analyst Job Market Analysis – Singapore (6-Week Study)

This project analyzes Data Analyst job vacancies in Singapore over a span of **6 weeks**. The goal is to extract actionable insights about the job market using Excel dashboards, SQL queries, and Tableau visualizations.





Objective

- Identify **most in-demand skills**
- Understand **salary ranges by experience level**
- Observe **weekly hiring trends**
- Rank companies by **average offered salary**
- Segment job listings by **experience level and frequency**



Tools & Technologies

Tool	Purpose
Excel	Pivot tables, visual dashboards
SQL	Data cleaning, querying, transformation
Tableau	Interactive dashboard with drill-down views



Methodology

Data

- Collected and compiled manually over 6 weeks
- Fields include: **Company Name**, **Job Title**, **Skills**, **Salary**, **Experience**, **Week**

Data Cleaning (via SQL)

- Converted **Experience** field from strings to integers, replacing "Intern" with NULL then backfilled
- Split comma-separated **Skills** into individual rows using a recursive CTE
- Normalized data types for consistency (e.g., **VARCHAR**, **INT**)

Analysis Performed

- **Experience-wise Vacancy Count**
Tracked how job openings vary with years of experience
- **Skill Frequency Analysis**
Used recursive SQL to split and count individual skills across listings
- **Experience vs Salary Breakdown**
Aggregated average, max, and min salary by experience level
- **Company-wise Salary Analysis**
Ranked companies by average salary offered
- **Weekly Posting Trends**
Job counts grouped by week for hiring trend analysis

SQL Highlights

```
-- Skill Frequency Count
WITH RECURSIVE split_skills AS (
    SELECT `COMPANY NAME`, `EXPERIENCE`,
           SUBSTRING_INDEX(`SKILLS`, ',', 1) AS skill,
           SUBSTRING(`SKILLS`, LENGTH(SUBSTRING_INDEX(`SKILLS`, ',', 1)) +
2) AS remaining
    FROM sg_companies
    UNION ALL
    SELECT `COMPANY NAME`, `EXPERIENCE`,
           SUBSTRING_INDEX(remaining, ',', 1),
           SUBSTRING(remaining, LENGTH(SUBSTRING_INDEX(remaining, ',', 1))
+ 2)
    FROM split_skills
    WHERE remaining != ''
)
SELECT TRIM(skill) AS SKILL, COUNT(*) AS COUNT
FROM split_skills
GROUP BY TRIM(skill)
ORDER BY COUNT DESC;
```

Visual Dashboards

◆ Excel Dashboard

- Pivot charts for experience and skill frequency
- Bar graphs for salary analysis
- Filter-enabled views for slicing by company or week

Key Insights

- **SQL, Excel, Python, and Power BI** are the top in-demand skills
 - Most job listings target candidates with **0–2 years of experience**
 - **Internships** are less frequent and typically unpaid or lower-paying
 - Certain companies consistently offer **above-average salaries**
 - Week 3 showed the **highest spike** in job listings
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