Wuzzuf Data Analysis Project

Overview: To explore job postings, types, company distribution, skills, and trends using filters and visuals for insightful decision-making.

PBIX File: https://drive.google.com/drive/folders/11uBUg8hiO-Gb1Xi2tao_A0uExcLmTbCp?usp=sharing

Check the Dashboard here:

https://app.powerbi.com/view?r=eyJrIjoiMjliOGZmOTYtOGNiZC00ODNhLWJkZWUtZWEyZDkyODkwNzQzIiwidCI6IjE1ODZIMWUzLTlmZTktNDg2Mi1hOWMxLTY3MDY2NTg5MWVhMSJ9&pageName=646b07a3c911164ed556

1)Data Cleaning & Transformation Report 🧹

As part of preparing the WUZZUF job analytics dashboard, significant data cleaning and transformation steps were performed to enhance data quality, usability, and analysis depth. Below is a detailed overview of the cleaning logic applied:

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    1. Handling Missing and Inconsistent Data

- **Number of Applications:**
  All null values in the "Number_of_Applications" field were replaced with zero to ensure accurate aggregations and avoid distortion in visualizations.

- **Standardizing Column Names:**
  All column headers were renamed using consistent naming conventions by removing spaces. This was done to align with Power BI best practices and prevent syntax errors during DAX measure creation.

- **Remove column without name:**

  Remove column without name or values to improve quality and avoid errors in visualization.

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2. Company Size Categorization

- The original company size values (e.g., "1-10 employees", "10,001+ employees", …, etc) were mapped into more readable and analysis-friendly categories:

  - Very Small, Small, Lower Medium, Medium, Upper Medium, Large, Very Large, Enterprise.

- This transformation enables better segmentation and comparative analysis, especially when plotting against metrics like experience level or job posting counts.

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3. Skills Normalization

- The "Job Skills" field, which initially contained concatenated lists of skills (with special characters like][and '), was cleaned and normalized:

  - All extraneous characters were removed.

  - The string was **split by delimiter** into individual skills.

  - A **new table** was created containing one skill per row, linked back to the main dataset using **Job ID**, establishing a **one-to-many relationship**.

- This setup now supports advanced analytics on skill frequency and demand across industries, job types, and regions

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4. Location Breakdown

- The original job location data was decomposed into two separate fields:

    ○ **City (State)** and **Region**.

- These values were organized into a separate **dimensional table** to improve slicer performance and enable clearer geographic filtering and analysis.

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5. Remote Job Classification

- A new derived column called **JobType** was created to classify jobs as either "*Remote*" or "Other".

- The classification was based on detecting the keyword "remote" using IF Condition in both:

    ○ Job_Title_Additional_Info

    ○ Job_Title_Full

- The logic was applied using Text.Contains in Power Query followed by a DAX measure to calculate the **remote job percentage** compared to the total.

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6. Pay Rate Field Handling

- You indicated ongoing work on the **Pay Rate** column, which likely involves cleaning inconsistent formats, handling ranges, and converting text values into numerical data where

applicable. This will be essential for future salary trend analysis or cost modeling.

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2)Dashboard & Visualization section 📊

1.Power BI Dashboard Evaluation Report – Page1

Dashboard Title: WUZZUF Job Analytics **Overview**

Purpose: The first page of the dashboard serves as a comprehensive overview of the job market data collected from WUZZUF. It is well-structured and allows users to explore job postings, types, company distribution, skills, and trends using filters and visuals for insightful decision-making.

1-Cards (KPI Section – Left Panel)

This section displays key metrics that offer a snapshot of the dataset. The inclusion of total skills, total postings, number of companies, and the percentage of remote jobs provides strong, immediate context.

- The **Total Skills** card highlights the variety of technical and soft skills in demand.

- The **Total Job Postings** metric (25.1K+) clearly communicates dataset scale. It's well-positioned as a top-level indicator.

- The **Number of Companies** (around 4.5K) shows a diverse sample. A next-level enhancement could involve categorizing this by company size, industry, or region to uncover deeper patterns.

- The **Remote Jobs Percentage** (approx. 19.78%) is a particularly insightful metric, especially for post-COVID work trends(after 2020 we detect a significant increase in Remote Jobs).


2- **Filters and Slicers**

Slicers at the top allow users to slice the data across key dimensions such as job title, industry, work type, position level, state, and region.

- These filters are essential for customized exploration and are effectively implemented. The dropdown format is clean and easy to use.

- The **Job Title**, **Industry**, and **Work Type** slicers work well to narrow down results based on job preferences and market segmentation.

- **Position Level** allows users to filter by seniority. A potential enhancement could be renaming it for clarity (e.g., "Job Seniority Level").

- **Geographic filters** (State and Region) are valuable for identifying local trends. Grouping them visually could declutter the slicer section.

- **"Clear All Filters"** button or a bookmark to reset all filters in one click.

3- **Charts and Visuals (Center & Bottom)**

This is the core insight section of the dashboard, combining various visual types for trend, distribution, and geographical analysis.

- The **horizontal bar chart** showing job counts by position type(full or part time, volunteer,..,etc) is effective and easy to interpret.

- The **line chart** illustrating average years of experience by company size provides a strong narrative.

- The **bar chart** of job postings by type of industry reveals demand trends effectively.

- The **map visual** for showing job location distribution.

- The **line chart** showing the average years of experience by huge of the company

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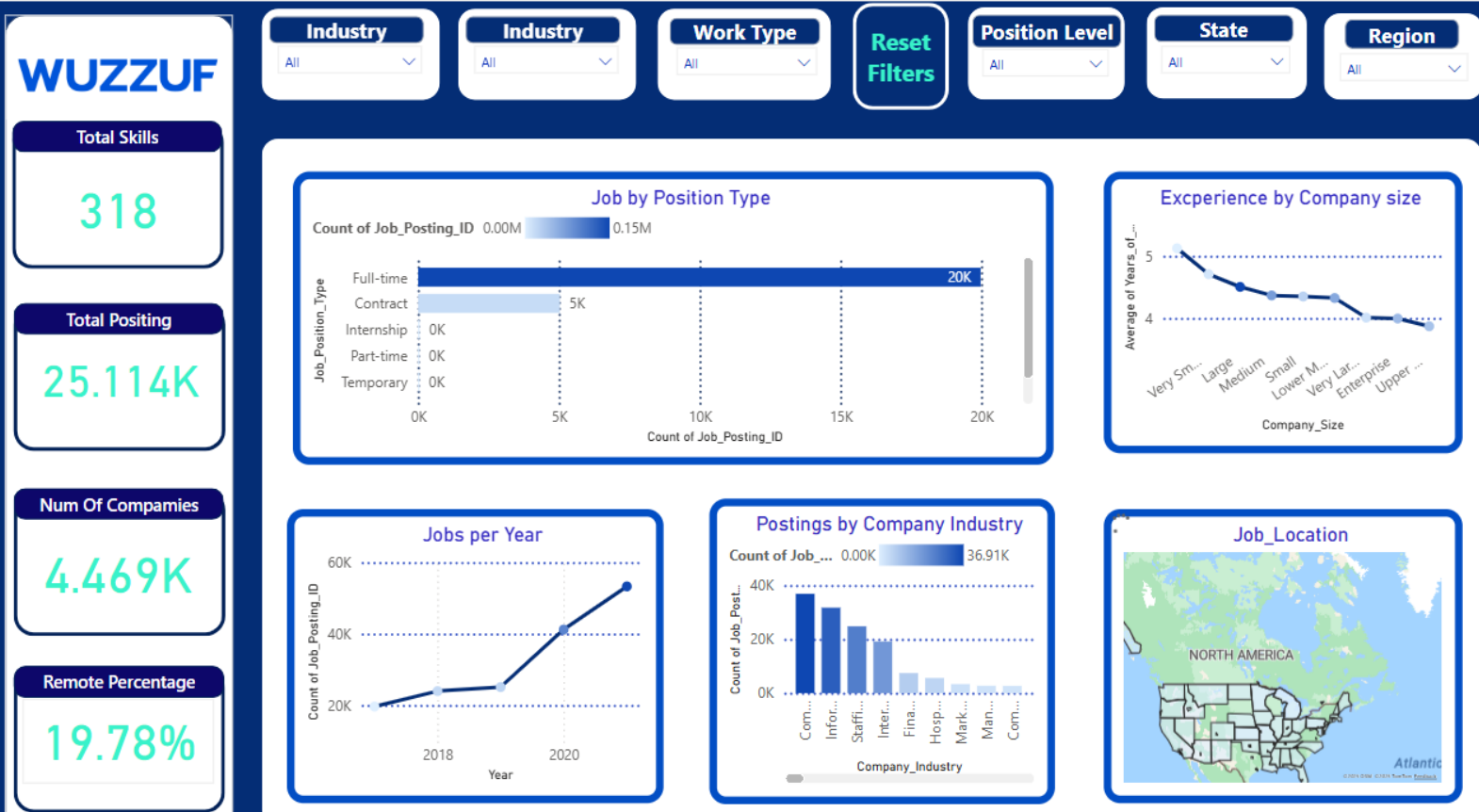
1.Power BI Dashboard Evaluation Report – Page2

Dashboard Title: WUZZUF Job Analytics **Snapshot**

Purpose: This dashboard provides a compact, interactive view of job market insights using WUZZUF data. Users can explore trends in skills demand, position levels, and job types across various industries. The use of slicers, charts, and word clouds makes it a useful tool for recruiters, job seekers, and labor market analysts.

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1. Filters & Slicers Panel

The dashboard includes a panel with key slicers for user-driven customization.

- **Filters:**
  - **Industry**
  - **Position Level**
  - **Work Type**
  - **Timeline Filter**

Evaluation:

- These slicers allow users to quickly segment data based on interest.
- Dropdown design is minimal and intuitive.
- An enhancement would be adding a "Clear All Filters" button or bookmark to reset all selections with a single click.
- Consider adding **Job Location** or **Company Size** filters for deeper filtering.

- Excellent for identifying changes over time

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2. Visuals & Charts

1) Word Cloud – Job Skills

- Displays popular job-related skills (e.g., sql, javascript, linux, agile).

- Useful for identifying high-demand competencies visually.

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2) Top Skills by Industry

- Shows which skills are most demanded in different industries.

- Well-organized vertical bars; highlights skill trends clearly.

- Supports targeted upskilling for career growth or recruitment.

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3)Avg Number of Applicants by Position Level and Type

- Displays applicant trends segmented by job level (Entry, Mid, etc.) and work type (Full-time, Contract, etc.).

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4) Job Position Level (Donut Chart)

- Breakdown of job postings by seniority (Entry, Associate, Director, etc.).

Evaluation:

- Easy to interpret, clean design.

- Consider grouping similar roles (e.g., Entry/Internship) for cleaner comparison.

- Adding % labels outside the chart may improve readability.

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5) Job Titles by Industry & Type of Work

- Displays how job titles are distributed across industries and work types (Contract, Full-time).

- Solid combination of segmentation by role and job type.

- Useful for workforce planning and understanding job type diversity.