Business Requirement Document: Job Market Analysis Dashboard

**1. Introduction**

This document outlines the business requirements for a comprehensive Job Market Analysis Dashboard. The dashboard aims to provide key stakeholders with actionable insights into current job market trends, salary landscapes, regional job distribution, and specific job posting analyses. The goal is to support data-driven decision-making for various business functions including recruitment, talent acquisition, strategic planning, and career development.

**2. Business Goals & Objectives**

* Gain a holistic view of the job market: Understand the overall volume of job postings, popular job titles, and in-demand skills.
* Analyze salary trends and benchmarks: Provide insights into average, median, minimum, and maximum salaries across different job schedules, skills, companies, and job titles.
* Identify regional job market dynamics: Pinpoint top countries for job postings and understand their distribution.
* Track job market trends over time: Monitor monthly job posting volumes, skill popularity, and job schedule trends.
* Support strategic talent acquisition: Inform recruitment strategies by highlighting critical skills, companies, and locations.
* Aid in career development and planning: Provide data for individuals and organizations to understand market demand for various roles and skills.

3. Scope

The Job Market Analysis Dashboard will consist of the following key sections/pages, as depicted in the provided images:

* Main Page: An overview page providing navigation to other detailed analysis sections.
* Job Posting Analysis: Detailed breakdown of job postings by various dimensions.
* Salary Insights: Comprehensive analysis of salary data.
* Regional Job Market Analysis: Insights into geographical distribution of jobs.
* Job Market Trends: Time-series analysis of job market indicators.

4. Detailed Requirements by Dashboard Section

4.1. Main Page

* Requirement: Provide a central hub for navigating to different analysis sections of the dashboard.
* Elements: Clearly labeled tiles/buttons for "Job Posting Analysis," "Salary Insights," "Regional Job Market Analysis," and "Job Market Trends."

4.2. Job Posting Analysis

Requirement: Enable users to analyze job postings based on job title, platform, company, and job schedule.

* Key Metrics/Visualizations:
  + Total Job Postings: Display the total number of job postings (e.g., "478.90K").
  + Job Title Breakdown:
    - matrix displaying the top job titles and the count of associated skills requested for each job title
    - Bar chart visualizing "Top 10 Job Titles."
  + Company Breakdown:
    - matrix showing job postings by company, broken down by job schedule types (e.g., Full-time, Contract, Internship, Part-time, Temporary, Work from home) and possibly a total count per company.
    - Bar chart visualizing "Top 10 Hiring Companies."
    - Purpose: To identify the leading companies in terms of job posting volume and understand their preferred job schedule types.
  + Job Postings Over Time:
    - Line chart showing the trend of job postings over months
  + Job Schedule Breakdown
    - **Donut chart visualizing**: This chart should show the proportional distribution of job postings across different schedule types
    - **Bar chart visualizing:** This chart should display the count of job postings for **"Work from home"**
    - Purpose: To understand the prevalence of different job schedule types.
* Filters/Slicers:
  + Month filter.
  + Platform filter.

4.3. Salary Insights

* Requirement: Provide detailed salary statistics and breakdowns by various attributes.
* Key Metrics/Visualizations:
  + Overall Salary Statistics: Display "Average Salary," "Median Salary," "Max Salary," and "Min Salary" (e.g., "120.59K," "113K," "920K," "15K").
  + Average Salary per Job Schedule Type: Bar chart showing average salaries for different job schedule types (e.g., Internship, Full Time, Part Time, Contract).
  + Average Salary per Skill: Bar chart showing average salaries for various skills (e.g., Python, SQL, Excel, Java, AWS, Azure, GCP).
  + Average Salary per Company: Bar chart showing average salaries offered by different companies.
  + Average Salary per Job Title: Bar chart showing average salaries for various job titles (e.g., Data Scientist, Data Engineer, Business Analyst).
* Filters:
  + Job Schedule filter.
  + Skill filter.
  + Company filter.
  + Job Title filter.

4.4. Regional Job Market Analysis

Requirement: Enable users to analyze regional job market dynamics, focusing on job titles, skill demand, and job schedule types across top countries.

Key Metrics/Visualizations:

* Job Titles for the Top 10 Countries (Bar Chart): A grouped/stacked bar chart displaying the distribution of specific job titles (e.g., Business Analyst, Data Scientist, Software Engineer) within each of the top 10 countries.
  + Purpose: To quickly identify which job roles are most prevalent in specific high-demand countries.
* Count of Skills by Country Table: A detailed table showing the count of jobs requiring specific skills (e.g., AWS, Azure, Excel, Java, Python, SQL, Tableau) for each of the top 10 countries.
  + Purpose: To pinpoint the most in-demand technical skills within key geographic regions, crucial for talent acquisition and skill development strategies.
* Count of Jobs (Total by Country - Bar Chart): A bar chart visualizing the overall total job counts for the top 10 countries.
  + Purpose: To provide a clear ranking of countries by their total job posting volume.
* Count of Jobs for Schedule Type by Top 10 Countries (Bar Chart): A grouped/stacked bar chart illustrating the distribution of job postings by schedule type (e.g., Contractor, Full-time, Internship, Part-time, Per diem, Temp work, Volunteer) for each of the top 10 countries.
  + Purpose: To understand regional preferences or common practices for employment types (e.g., higher contract work in one country versus full-time in another).
* Map Visualization (Count of Jobs): A world map displaying the geographical distribution of job postings, potentially with varying intensity or color to represent job density across continents/regions.
  + Purpose: To offer a high-level visual overview of global job market hotspots.
* Filters:
* Country filter.
* Job Title filter.
* Skill filter.
* Schedule Type filter.

4.5. Job Market Trends

* Requirement: Track job market indicators over time, focusing on monthly trends and skill/schedule type evolution.
* Key Metrics/Visualizations:
  + Monthly Overview: Display "Total Posts" and "Posts Previous Month" for the current month.
  + Top Skill for the Current Month: Highlight the top skill for the current month (e.g., "Python 26.7K").
  + Top Skill in the Previous Month: Highlight the top skill for the previous month (e.g., "22.0K").
  + Monthly Jobs Count by Top 10 Countries: Line charts showing job posting trends for the top 10 countries over time.
  + Top 10 Skills Over Time: Line charts showing the trend in demand for the top 10 skills over time.
  + Top 10 Schedule Type Trend: Line charts showing the trend in different job schedule types over time.
* Filters/Slicers (if applicable and visible):
  + Month.
  + Country filter.
  + Skill filter.

5. Data Sources

The dashboard will rely on data from a job\_post\_fact table, Company\_dim, DateTimeTable, job\_schedule\_type, job\_posts, and Skill\_dim, Skill\_job\_dim, as indicated in the "Data" pane of the Power BI interface. Specific fields observed include:

* Measure\_table (contains various measures like Dummy, Posts\_variance, Prev\_month\_topskill, previous\_month, Skill\_variance, Top Skill, Top\_Skill\_count, Zero)
* Top10Countries
* Top10Skills
* Top10Platform

6. User Interface (UI) / User Experience (UX) Requirements

* Intuitive Navigation: Easy movement between dashboard sections.
* Clear Visualizations: Charts and tables should be easy to understand and interpret.
* Interactivity: Users should be able to filter and slice data to gain deeper insights.
* Consistent Design: A consistent look and feel across all dashboard pages.
* Performance: The dashboard should load quickly and respond efficiently to user interactions.

7. Technical Requirements (Implicit from Power BI environment)

* Platform: Power BI Desktop for development, Power BI Service for deployment and sharing.
* Data Connectivity: Secure and efficient connection to underlying data sources.
* Data Refresh: Automated data refresh schedule to ensure data currency.
* Security: Role-based access control (if required) to sensitive salary data or specific reports.

8. Success Metrics

The success of this dashboard will be measured by:

* User Adoption: Frequency and number of unique users accessing the dashboard.
* Actionable Insights: Evidence of data from the dashboard being used to make business decisions (e.g., adjusting recruitment strategies, identifying training needs).
* Reduced Manual Reporting Effort: Decrease in time spent on generating ad-hoc reports related to job market analysis.

This document serves as a foundational set of requirements. Further detailed discussions with stakeholders may be necessary to refine and prioritize specific features.