**User Requirements Document (URD)**

**Project Title**

**Data Professional Survey Insights Dashboard**

**1. Purpose**

**The goal is to create a Power BI dashboard that analyzes survey responses from data professionals. The dashboard will provide insights into:**

* **Geographical distribution of respondents.**
* **Salary trends by job title.**
* **Popular programming languages.**
* **Challenges of breaking into the data profession.**
* **Demographic insights (age, happiness).**

**This tool will help HR, management, and educational providers make data-driven decisions.**

**2. User Story**

**As a Human Resources Manager, Training Provider, or Team Lead,  
I want an interactive dashboard that provides insights into data professionals' demographics, salaries, preferences, and challenges,  
So that I can make informed decisions to improve recruitment strategies, training programs, and employee satisfaction initiatives.**

**3. Scope**

**In Scope**

* **Integration and analysis of survey responses, including:**
  + **Respondents’ country of residence.**
  + **Average salary by job title.**
  + **Favourite programming language.**
  + **Difficulty in breaking into the data field.**
  + **Average age and happiness levels.**
* **Power BI dashboard with interactive visuals (maps, charts, filters).**

**Out of Scope**

* **Detailed policy recommendations based on insights.**
* **Predictive analytics beyond survey data.**

**4. User Roles and Responsibilities**

**Primary Users**

1. **HR Teams: Analyse salary trends and demographic insights for recruitment.**
2. **Educational Providers: Adjust training programs based on challenges and preferred tools.**
3. **Executives: Review trends for strategic decision-making.**

**5. Functional Requirements**

* **Survey Data: Integration of fields like country, job title, salary, programming language, age, and happiness level.**
* **Visuals:**
  + **Tree map of respondents' countries.**
  + **Bar chart for salary by job title.**
  + **Bar chart for favourite programming languages.**
  + **Pie chart for difficulty of breaking into data.**
  + **Numeric KPI for average age and happiness.**
* **Filters/Slicers: By country, job title, programming language, age group, and more.**
* **Interactivity: Dynamic updates when applying filters.**

**6. Non-Functional Requirements**

* **Performance: Dashboard should load within 10 seconds for datasets of up to 1000 records.**
* **Usability: Easy-to-navigate dashboard for non-technical users.**
* **Scalability: Ability to handle additional data and new metrics.**
* **Security: Comply with data privacy regulations.**

**7. Data Sources**

* **Survey Data: Collected via tools like Google Forms, Microsoft Forms, or Qualtrics.**
* **Metadata (if applicable): Standardized job titles, roles, and salary information.**

**8. Assumptions and Constraints**

**Assumptions**

* **Survey data is accurate and up-to-date.**
* **HR will provide access to metadata and survey responses.**

**Constraints**

* **Limited to available Power BI tools and infrastructure.**
* **Privacy policies may limit access to some sensitive demographic data.**

**9. Risks and Mitigations**

| **Risk** | **Mitigation** |
| --- | --- |
| **Incomplete or inaccurate data** | **Validate data during cleaning and testing.** |
| **Performance issues with large datasets** | **Optimise Power BI queries and visuals.** |
| **User adoption challenges** | **Provide training and documentation for end users.** |

**10. Deliverables**

1. **Power BI Dashboard: Fully interactive dashboard with all required features.**
2. **Documentation:**
   * **Data sources and connections.**
   * **How to use the dashboard.**
   * **Data model and transformations used in Power BI.**

**11. Timeline**

| **Phase** | **Duration** |
| --- | --- |
| **Data Collection** | **1 week** |
| **Data Cleaning and Exploration** | **2 weeks** |
| **Dashboard Development** | **3 weeks** |
| **Testing and Feedback** | **1 week** |
| **Final Deployment and Delivery** | **1 week** |

**12. Acceptance Criteria**

1. **The dashboard displays all required metrics: salary, country, programming language, age, happiness.**
2. **All filters and slicers work as expected, allowing dynamic exploration.**
3. **Performance meets requirements (e.g., loads within 10 seconds).**
4. **The data is accurate and validated.**

**13. Validation Plan**

1. **Data Verification: Ensure that the survey data is clean and valid.**
2. **User Testing: Involve end-users in testing to ensure usability and correctness.**
3. **Performance Testing: Test dashboard load times with a sample dataset.**

**14. Approval**

**This document is approved by the following stakeholders:**

| **Name** | **Role** | **Date** |
| --- | --- | --- |
| **[Your Name]** | **Project Manager** | **[Insert Date]** |
| **[Stakeholder Name]** | **HR Manager** | **[Insert Date]** |
| **[Executive Name]** | **Project Sponsor** | **[Insert Date]** |