**Dashboard Design Document**

**Project Title**: Data Science Market Insights Dashboard  
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**Dashboard Overview**

The **Data Science Market Insights Dashboard** is designed to provide an intuitive and interactive exploration of the global data science job market. The goal is to combine multiple visualizations into a single dashboard, offering insights into salaries, employment types, and workforce distributions.

**Design Objectives**

1. **Clarity**: Ensure that each visualization is easy to interpret and highlights key insights.
2. **Interactivity**: Provide filters for users to customize views based on specific dimensions (e.g., Job Titles, Company Locations).
3. **Accessibility**: Arrange elements logically for smooth navigation and intuitive user experience.

**Key Components**

**1. Average Salary in USD by Experience Level and Employment Type**

* **Type**: Scatter Plot
* **Purpose**: Compare average salaries across different experience levels (Entry, Intermediate, Senior) and employment types (Full-time, Part-time, Freelance, Contract).
* **Position**: Top-left of the dashboard.

**2. Top 10 Employee Residences**

* **Type**: Vertical Bar Chart
* **Purpose**: Showcase the top 10 countries with the highest number of data science professionals.
* **Position**: Middle-left section.

**3. Companies by Size and Location**

* **Type**: Donut Chart
* **Purpose**: Visualize the distribution of companies by size (Small, Medium, Large) and their geographic regions.
* **Position**: Top-center of the dashboard.

**4. Map: Average Salary by Country**

* **Type**: Geospatial Map
* **Purpose**: Display the average salary distribution globally.
* **Position**: Top-right of the dashboard.

**5. Average Salary by Job Title and Experience Level**

* **Type**: Table
* **Purpose**: Present detailed salary information broken down by job titles and experience levels.
* **Position**: Bottom-right section.

**6. Experience Level and Employment Type**

* **Type**: Donut Chart
* **Purpose**: Highlight the breakdown of professionals by their experience levels and employment types.
* **Position**: Middle-center.

**7. Salary Trends Over Years**

* **Type**: Line Chart
* **Purpose**: Depict changes in average salaries over the years to identify trends.
* **Position**: Bottom-left section.

**8. Final Filters**

* **Filters Included**:
  + Job Title
  + Company Location
  + Work Year
  + Employment Type
  + Experience Level
* **Placement**: Top row of the dashboard for easy accessibility.

**Color Scheme and Formatting**

1. **Primary Color Palette**:
   * Dark Blue (#001f3f) as the background for better visual contrast.
   * Light Blue (#7FDBFF) for data points and highlights.
2. **Fonts**:
   * Titles: Sans Serif, Bold, 14pt.
   * Labels: Sans Serif, Regular, 10pt.
3. **Tooltips**:
   * Add detailed information for each data point when users hover over visualizations.

**Interactivity Design**

1. **Filters**: Enable dynamic filtering by job title, location, work year, and employment type.
2. **Tooltips**: Provide concise information for every data point on hover.
3. **Drill-Downs**: Allow users to explore specific details by clicking on visualization elements.

**Testing and Review**

1. Test the dashboard for functionality and responsiveness.
2. Ensure accurate filtering and proper alignment of visual elements.
3. Validate interactivity to enhance user engagement.

**Final Layout**

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| Filters: Job Title | Location | Year |

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| Avg Salary (Scatter) | Companies (Donut) |

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| Top Residences (Bar) | Map (Geospatial) |

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| Exp Level (Donut) | Salary Table |

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| Salary Trends (Line Chart) |

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