**IS-5960-04: MRP**

**Employability Analytics Project**

**Week 5 Deliverable:**

**Preliminary Design Considerations**

**Group Name:** Team 16

**Group Members:**

Ananya Chowdary Bheemaneni

Maneesha Kakarla

Bala Krishna Kalavakunta

Laya Kalva

Manohar Kancharla

Sai Venkata Sriram Chowdary Karicheti

**Problem Statement**

Our project aims to optimize career advisory services by leveraging data-driven insights to enhance employability outcomes for job seekers. The Employability Analytics Application will assist career advisors by providing real-time job market trends, skill gap analysis, salary benchmarks, and recruitment patterns.

By addressing challenges such as data integration, insights generation, personalized recommendations, and technology modernization, the project will empower career advisors with actionable intelligence to guide students and professionals effectively.

**Components of the Problem Statement**

|  |  |  |
| --- | --- | --- |
| **Component of Problem Statement** | **Module to Include** | **Relevant Data (Variables/Fields) Produced by the Module** |
| Job Market Trends | Labor Market Insights | Title, location, company name, industry sector, job posting date |
| Salary Benchmarking | Compensation Analysis | Title, company, location, experience level, contract type |
| Candidate Interest | Application Analytics | Job title, application count, contract type, experience level |
| Career Path Insights | Experience and Work Type | Work type, experience level, industry sector, company name |
| Employer Demand | Hiring Patterns | Job title, employer, contract type, location, applications count |

**Data Structure and Variables**

The dataset which we have selected for this project is sourced from the Kaggle platform and contains job listings for Business Analyst roles. Below is a summary of the identified tables and their key variables:

|  |  |  |
| --- | --- | --- |
| **Table Name** | **Variables** | **Data Type** |
| Business\_Analyst\_Jobs | Title | String |
|  | Location | String |
|  | Published Date | Date |
|  | Company Name | String |
|  | Description | String |
|  | Applications Count | Integer |
|  | Contract Type | String |
|  | Experience Level | String |
|  | Work Type | String |
|  | Sector | String |

**Preliminary Design Considerations**

* **Data Integration:** We will aggregate information from multiple job listings to analyze trends in the hiring landscape.
* **Job Market Insights:** We will track industry-specific demand, preferred experience levels, and application trends.
* **Personalization:** We will develop a dashboard for career recommendations aligned with current job openings and industry demands.
* **Usability:** We will design an interactive dashboard that provides real-time insights into hiring trends.
* **Scalability & Security:** We will ensure the platform is scalable for handling large datasets and is compliant with data security regulations.

**Conclusion**

The Employability Analytics Application will bridge the gap between job seekers and career advisors by providing data-backed recommendations. Through real-time insights and predictive analytics, career advisors can offer tailored guidance, ensuring job seekers are better equipped for the evolving workforce landscape.