

Introduction

Group – 13

IS - 5960: Masters Research Project

Prof. Maria Weber, M.S

Jan 17, 2025.

Members:

1. Srividya Chatakondur
2. Sai Nikhil Reddy Kura
3. Venkata Rahul Chinta
4. Divya Garapati
5. Thanusha Reddy Elluru

Employability Analytics Application (FutureWorks Solutions): Overview

FutureWorks Solutions will help in solving one of the complex issues in the recruitment and workforce consultancy domain: the absence of an Employability Analytics Application which can effectively aggregate, analyze, and transform diverse data sources including job market trends, professional profiles, salary benchmarks, and industry demand reports into actionable insights. The current Technological infrastructure lacks the capability to provide real-time, data-driven intelligence, preventing individuals who are interested in learning more about various aspects of employability to help them make informed decisions about specific job roles. The proposed Employability Analytics Application aims to fill this critical gap by creating a sophisticated, integrated platform that transforms raw data into strategic insights which enables FutureWorks Solutions to enhance its service quality, improve decision-making processes, and maintain its brand value among the rapidly evolving recruitment ecosystem. ((Mishra, Mishra, & Garg, 2021).

Decision Maker:

An Individual who is interested in learning more about various aspects of employability to help in process of making informed decisions about specific job roles.

Description of a Decision-Maker Profile: An Individual Seeking Career Guidance.

Our primary target decision-maker is an Individual interested in learning about various aspects of employability to make more informed decisions about specific job roles. This person can be a recent graduate, a mid-career professional considering a change, or someone trying re-enter the workforce. (Römgens, Scoupe, & Beusaert, 2020).

Types of Decisions based on Employability (Challenges).

Few Factors to be considered by the Individual,

1. **Career Path Selection:** Choosing a suitable career path aligned with their skills and interests. (Tomlinson & Jackson, 2021).
2. **Skill Development:** Identifying which skills to acquire or improve for desired roles. (Abelha et al., 2023).
3. **Job Application Strategy:** Determining which roles to apply for and how to position themselves. (Jackson & Tomlinson, 2020).
4. **Education and Training:** Deciding on further education or training programs to enhance employability. (Pillay & James, 2021).
5. **Industry Focus:** Selecting industries with promising growth and opportunities. (Soproni, 2023).

Information Needed to Inform Decisions.

To make effective decisions, the individual requires,

- **Job Market Trends:** Current and projected demand for various roles and industries. (Mishra, Mishra, & Garg, 2021).
- **Skill Requirements:** Specific skills and qualifications needed for desired positions. (Tomlinson & Jackson, 2021).
- **Salary Information:** Compensation ranges for different roles and experience levels. (Jackson & Tomlinson, 2020).
- **Career Progression Paths:** Typical career trajectories within chosen fields. (Römgens, Scoupe, & Beusaert, 2020).
- **Industry Growth Projections:** Insights into expanding and contracting sectors. (Abelha et al., 2023).
- **Geographical Job Market Variations:** Employment opportunities across different locations. (Mishra, Mishra, & Garg, 2021).
- **Company Cultures and Work Environments:** Insights into potential employers' work cultures. (Pillay & James, 2021).

Data Sources.

The application should aggregate and analyze data from:

1. **Job Posting Platforms:** Such as LinkedIn, indeed, Glassdoor, etc. (Soproni, 2023).
2. **Professional Networking Sites:** For career path and progression insights. (Tomlinson & Jackson, 2021).
3. **Government Labor Statistics:** Official employment and workforce reports. (Jackson & Tomlinson, 2020).
4. **Industry Reports and Surveys:** Sector-specific insights and forecasts. (Abelha et al., 2023).
5. **Educational Institutions:** Information on courses, programs, and graduate outcomes. (Römgens, Scoupe, & Beusaert, 2020).
6. **Company Websites and Reviews:** For culture and work environment insights. (Pillay & James, 2021).
7. **Professional Associations:** Industry-specific trends and requirements. (Tight, 2023).

Data Presentation Format.

The information should be presented in the following forms:

- **Interactive Career Path Maps:** Visual representations of potential career trajectories. (Römgens, Scoupe, & Beausaert, 2020).
- **Skill Gap Analysis Charts:** Comparing user's current skills with job requirements. (Tomlinson & Jackson, 2021).
- **Salary Comparison Tools:** Interactive graphs showing salary ranges across roles and locations. (Jackson & Tomlinson, 2020).
- **Industry Trend Dashboards:** Visualizations of growing and declining sectors. (Abelha et al., 2023).
- **Personalized Skill Development Plans:** Tailored recommendations for skill acquisition. (Soproni, 2023).
- **Job Market Heat Maps:** Geographical representations of job opportunities. (Mishra, Mishra, & Garg, 2021).
- **Role Compatibility Scores:** Matching user profiles with potential job roles. (Pillay & James, 2021).

User-Friendly Interactive Features.

The application should include the following interactive elements and features:

1. **Personalized Dashboard:** A customizable homepage showing relevant career insights and recommendations. (Tight, 2023).
2. **Skill Assessment Tools:** Interactive quizzes and evaluations to assess current skill levels. (Tomlinson & Jackson, 2021).
3. **Job Role Explorer:** A tool to browse and compare different job roles and their requirements. (Jackson & Tomlinson, 2020).
4. **Career Path Simulator:** An interactive feature allowing users to visualize potential career trajectories based on different choices. (Römgens, Scoupe, & Beausaert, 2020).
5. **Learning Resource Integration:** Direct links to relevant courses, webinars, and training programs. (Soproni, 2023).
6. **Resume Builder:** An AI-assisted tool used to create and optimize resumes for specific roles. (Mishra, Mishra, & Garg, 2021).
7. **Interview Preparation Module:** Practice interviews with AI-generated questions based on the specific job roles. (Pillay & James, 2021).

8. **Networking Suggestions:** Recommendations for professional groups, events, or individuals to connect with. (Abelha et al., 2023).
9. **Salary Negotiation Guide:** Interactive tools to help users understand their market value and negotiate effectively. (Jackson & Tomlinson, 2020).
10. **Work-Life Balance Estimator:** Insights into typical work hours, stress levels, and work-life balance for different job roles. (Tight, 2023).
11. **Company Culture Matcher:** A tool used to match user preferences with company cultures. (Pillay & James, 2021).
12. **Mobile App Integration:** Ensuring full functionality and push notifications on mobile devices. (Soproni, 2023).
13. **Goal Setting and Monitoring:** Ensures Features to set career goals and track progress over time. (Mishra, Mishra, & Garg, 2021).
14. **Feedback and Improvement Loop:** Ensures the Mechanisms for users to provide feedback on the accuracy and usefulness of recommendations. (Tight, 2023).
15. **Accessibility features:** Ensuring the application is useable for individuals with diverse needs and abilities. (Abelha et al., 2023).

By adding these features, the Employability Analytics Application will provide individuals with a comprehensive, user-friendly tool to explore career options, assess their skills, and make informed decisions about their professional career. This application will empower users with data-driven insights, personalized recommendations, and practical tools to enhance their employability chances and navigate the complex job market platform effectively. (Mishra, Mishra, & Garg, 2021).

REFERENCES

- Abelha, M., Fernandes, S., Mesquita, D., Seabra, F., & Ferreira-Oliveira, A. T. (2023). Global employability skills in the 21st century workplace. *Plos one*, 18(10), e0292731.
- Jackson, D., & Tomlinson, M. (2020). The relative importance of work experience, extra-curricular and university-based activities on student employability. *Higher Education Research & Development*, 39(7), 1451-1465.
- Mishra, S., Mishra, A. K., & Garg, K. (2021). Employability prediction: a survey of current approaches, research challenges and future directions. *Artificial Intelligence Review*, 54(5), 3595-3674.
- Pillay, S., & James, R. (2021). Assessing the employability and employment destinations of psychology master's graduates in South Africa. *Industry and Higher Education*, 35(6), 668-681.
- Römgens, I., Scoupe, R., & Beusaert, S. (2020). Unraveling the concept of employability, bringing together research on employability in higher education and the workplace. *Studies in Higher Education*, 45(12), 2588-2603.
- Soproni, L. (2023). Employability Skills: Rethink Your Learning. *Global Journal of Social Sciences and Development*, 6(2), 53-65.
- Tight, M. (2023). Employability: a core role of higher education? *Research in Post-Compulsory Education*, 28(4), 371-386.
- Tomlinson, M., & Jackson, D. (2021). Professional identity formation in contemporary higher education students. *Studies in Higher Education*, 46(4), 885-900.