JobFit Explorer

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Abstract

In today's dynamic job market, individuals often struggle to find suitable career paths that align with their academic backgrounds and personal interests, leading to dissatisfaction and underutilization of skills. To address this challenge and contribute to the United Nations Sustainable Development Goal of Decent Work and Economic Growth, we present JobFit Explorer—a job finder application designed to provide personalized career guidance. The primary objective of JobFit Explorer is to match users' academic backgrounds and interests with relevant industries and job roles, offering tailored recommendations and insights.

The application leverages users' academic background and interests to suggest industries that are well-suited to their profiles. Additionally, JobFit Explorer provides information on the top-performing industries in terms of job growth, salary, and demand. Users can search for specific job roles within recommended industries and access relevant job listings. The application generates statistical data on various industries, including job growth rates, average salaries, and employment trends.

Although the project faces constraints such as limited availability of real-time data and a focus on a select number of industries, JobFit Explorer aims to empower individuals to make informed career decisions, fostering economic growth by ensuring a better match between individuals' skills and job opportunities. By addressing the challenge of navigating the job market and offering personalized guidance, JobFit Explorer contributes to the larger goal of promoting Decent Work and Economic Growth. Keywords— JobFit Explorer Career guidance Academic background Personal interests Job market Job roles Industry matching Job growth Salary trends Demand analysis Statistical data Employment trends Economic growth United Nations Sustainable Development Goals Decent Work and Economic Growth Job finder application Industry recommendations Real-time data Informed career decisions Job opportunities.

I. INTRODUCTION

The JobFit Explorer is a job finder application designed to assist individuals in identifying suitable industries and job opportunities based on their academic background and interests. This application aims to address the goal of Decent Work and Economic Growth, which is one of the United Nations Sustainable Development Goals (SDGs).

The primary objective of JobFit Explorer is to provide personalized career guidance by matching users' academic backgrounds and interests with relevant industries and job roles. By leveraging this information, the application suggests industries that are well-suited to the users and provides insights into the specific job occupations that people with similar profiles have pursued or shown interest in.

The problem this project seeks to solve is the challenge individuals often face when trying to navigate the job market and identify suitable career paths. Many individuals struggle to align their academic background and personal interests with available job opportunities, resulting in dissatisfaction and underutilization of skills. JobFit Explorer aims to bridge this gap by providing tailored recommendations and facilitating informed career choices.

The project's scope includes the following features and functionalities:

1. Interest Matching: The application will analyze users' academic background and interests to match them with suitable industries and job roles.

2. Industry Suggestions: Based on the user's profile, the application will suggest industries that align with their academic background and interests.

3. Top Performing Industries: The application will provide information on the top-performing industries in terms of job growth, salary, and demand.

4. Job Finding: Users can search for specific job roles within recommended industries and access relevant job listings.

5. Industry Statistics: The application will generate statistical data on various industries, including job growth rates, average salaries, and employment trends.

Constraints of the project may include limited availability of real-time data for industries and job roles, as well as the need to simplify the application by focusing on a select number of industries (Medical, Business, Technology, Engineering, and Creatives).
By offering personalized recommendations and insights, JobFit Explorer aims to empower individuals to make informed decisions about their careers, fostering economic growth by ensuring a better match between individuals' skills and job opportunities.

II. Related Use

The dynamic nature of the job market poses challenges for individuals seeking suitable career paths aligned with their skills and passions. In response to this issue, several applications have been developed to address the goal of Decent Work and Economic Growth by providing personalized career recommendations and insights. Among them, the JobFit Explorer stands out as an application designed to match users' academic backgrounds and interests with relevant industries and job roles.

Related Work:

Glassdoor:

Glassdoor is a prominent platform that offers personalized career guidance to job seekers. It provides users with company reviews, salary information, and interview experiences shared by current and former employees. This data helps users gain insights into the work environment, compensation packages, and career growth opportunities within different industries. Glassdoor's community-driven approach empowers job seekers to make informed decisions, thereby fostering a better match between individuals and job opportunities.

Indeed:

Indeed is a widely-used job search engine that offers personalized job recommendations based on users' profiles, including their academic background and location preferences. By leveraging advanced algorithms, Indeed provides tailored job listings that align with users' skills and interests. Additionally, users can access company reviews and salary data, enhancing their understanding of potential employers and industries. Through its user-friendly interface and comprehensive database, Indeed contributes to promoting Decent Work and Economic Growth by facilitating informed career choices.

Jobstreet:

Jobstreet is a popular job portal in Asia that provides personalized job recommendations to candidates based on their qualifications and preferences. The platform collaborates with employers to offer a wide array of job opportunities across various industries. Users can access company profiles, salary insights, and other pertinent information to make well-informed decisions. Jobstreet's efforts in bridging the gap between job seekers and employers contribute to economic growth by ensuring a suitable match between candidates and job vacancies.

III. Proposed application

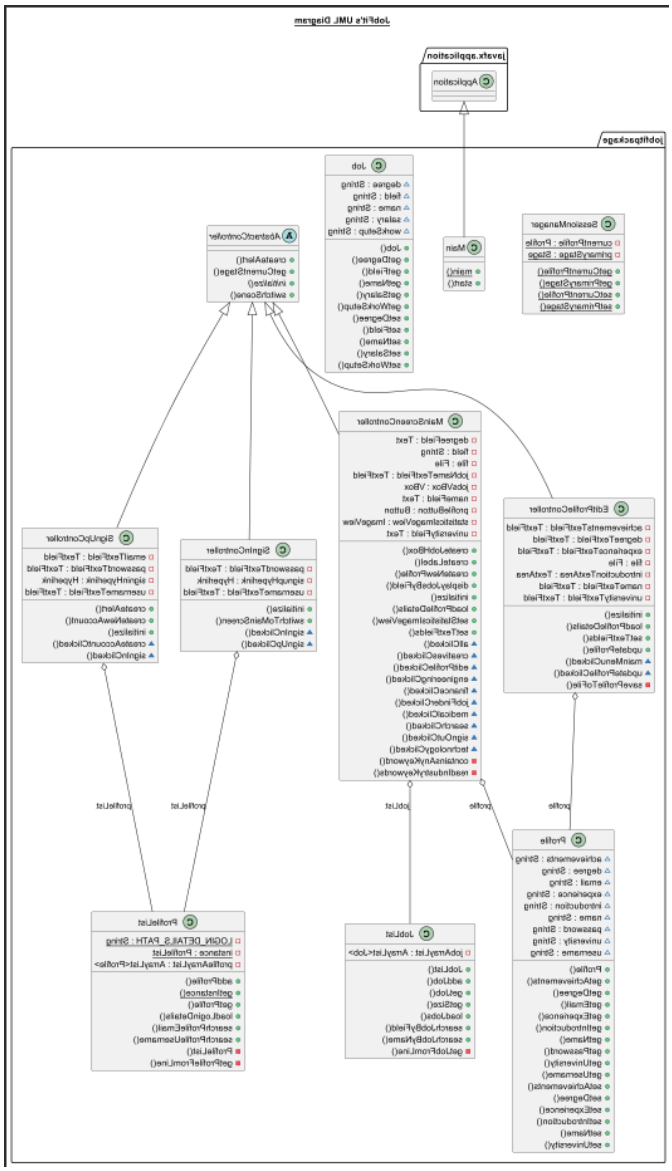
JobFit Explorer
This app will match your interest and passion with possible careers that you can have.

GOAL 8: Decent Work and Economic Growth
To make a job finder app that asks you what your academic background and interest are and suggests what industry is fit for you along with what jobs people like you are taking and are interested in

Features
Interest matching
Industry Suggestions
Top performing industries
Job Finding
Industry Statistics

IV. IMPLENTATION/OOP ASPECTS

A. Uml Diagram



Explanation:
In this diagram, we have several classes belonging to the "jobfitpackage" namespace, which is the main package containing classes related to the JobFit application.

Main: This class extends javafx.application.Application and contains the main entry point (main()) and the application start method (start()). It acts as the starting point of the JavaFX application.

AbstractController: An abstract class that defines common methods for other controllers. It contains methods like createAlert(), getCurrentStage(), initialize(), and switchScene().

EditProfileController: A controller responsible for managing the user profile editing view. It contains fields for various profile details like achievements, degree, experience, etc. The class is associated with the Profile class, representing the user's profile.

Job: This class represents a job with attributes like degree, field, name, salary, and work setup. It also includes getter and setter methods to access and modify these attributes.

JobList: This class manages a list of Job objects and provides methods for adding jobs, searching for jobs by name or field, and loading jobs from a file.

MainScreenController: This controller handles the main screen of the application, displaying job information and user profiles. It interacts with the ProfileList class and JobList class.

Profile: This class represents a user profile with attributes like achievements, degree, email, experience, introduction, name, password, university, and username. It includes getter and setter methods for accessing and modifying profile information.

ProfileList: This class manages a list of Profile objects and provides methods for adding profiles, searching for profiles by email or username, and loading profile details from a file. It acts as a data storage and retrieval system for user profiles.

SessionManager: This class provides static methods to manage the current user profile (currentProfile) and the primary stage of the application (primaryStage). It allows for easy access to the current user's profile across different parts of the application.

SignInController: This controller manages the sign-in view, where users can log in to their accounts. It interacts with the ProfileList class to check user credentials.

SignUpController: This controller handles the sign-up view, where users can create new accounts. It interacts with the ProfileList class to add new user profiles.

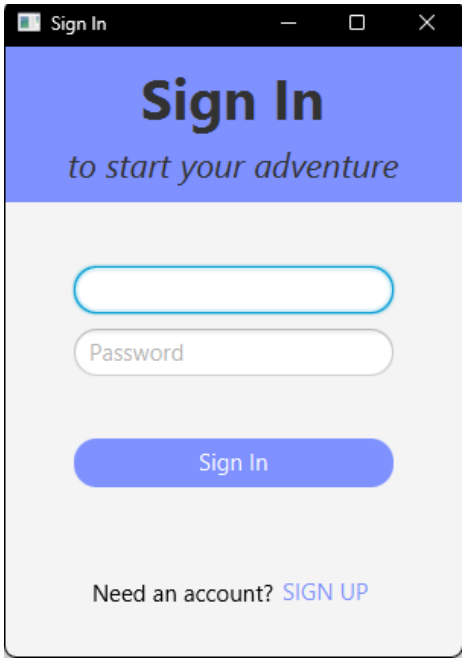
Relationships:
The inheritance relationship (-up-|>) between EditProfileController and AbstractController indicates that EditProfileController is a subclass of AbstractController, inheriting its common methods.

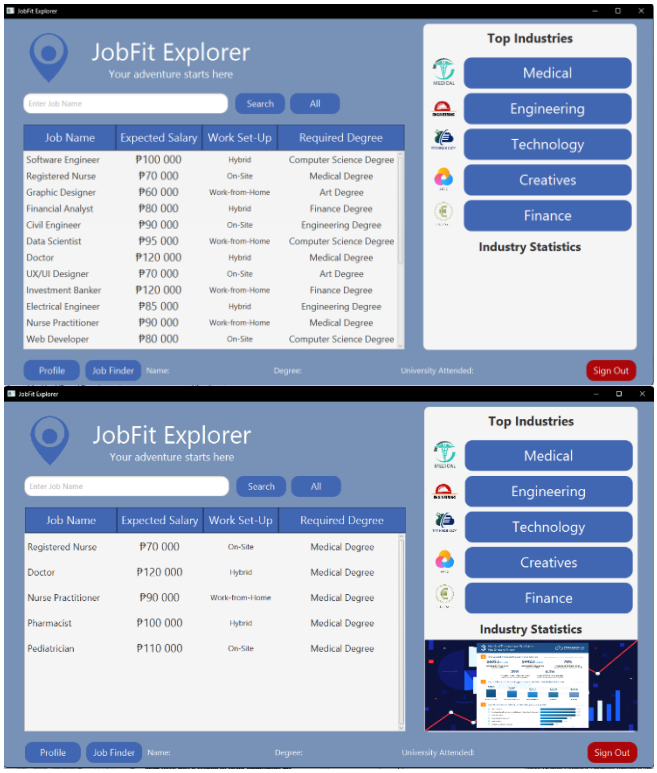
The aggregation relationship (o--) between EditProfileController and Profile indicates that EditProfileController has a reference to the Profile class, likely to manage the user's profile data.

The association relationships (o--) between MainScreenController and JobList and Profile indicate that MainScreenController interacts with these classes to display job information and user profiles.

The association relationship (o--) between SignInController and ProfileList and SignUpController and ProfileList indicates that these controllers interact with the ProfileList class to perform user sign-in and sign-up operations.

B. Project Screen shot





Explanation:
Using multiple classes the app will be able to store your profile in its database so that you can log in anytime and edit your profile, your data will also be used as a reference point on how to match you with your ideal career and will be used as your basic information when being sent to potential employers.

C. OOP Pillars

Abstraction
- An abstract class named AbstractController is created that contains the methods that will be commonly used by all Controller classes
- switchScene() for switching between scenes
- createAlert() for creating Alert windows for various situations e.g. Profile not Found during Sign in, Account Creation Successful during Sign Up, etc.

Inheritance
- Main inherits Application
- Controller classes inherits the AbstractController class

Encapsulation
- The Controller classes make use of the Profile, ProfileList, Job, and JobList objects' specific attributes for displaying their respective scenes

Polymorphism
- All the Controller classes override AbstractController's initialize() method

D. Member contributions

Name	Contribution
Angelo Christian Balagtas	Logic code, GUI enhancements, Documentation
John Ray Cardeno	GUI layout, Documentation, Assets
Aztine Armelle Ganaden	Additional features, Documentation, Statistics

V. WALKTRHOUGH DATA/REULTS

Log-in/Sign-In Page: Upon opening the JobFit Explorer application, users are greeted with a user-friendly Log-in/Sign-in page that introduces the app's purpose and features. Users are prompted to input their academic background and interests to receive tailored career recommendations.

User Profile Input: In the next step, users are presented with a form where they can enter their academic background, including educational qualifications, degrees, and areas of specialization. Additionally, users are asked to provide their personal interests and such.

Interest Matching: After inputting their academic background and interests, users proceed to the interest matching stage. The application's algorithms analyze the user's profile and compare it with a database of industries and job roles.

Industry Suggestions: Based on the interest matching analysis, the application generates a list of industries that

align with the user's academic background and interests. Each industry is accompanied by a brief description, highlighting its key characteristics and potential career opportunities.

Top Performing Industries: The application also presents a section showcasing the top-performing industries in terms of job growth, salary, and demand. This data is derived from a comprehensive database of industry statistics.

Job Finding: Users have the option to explore specific job roles within the suggested industries. The application provides a search feature where users can input job titles and access relevant job listings.

Industry Statistics: In this section, the application generates statistical data on various industries, offering insights into job growth rates, average salaries, and employment trends. Users can use this data to make informed career decisions.

Results and Findings:

Personalized Career Guidance: The walkthrough of JobFit Explorer demonstrates its success in providing personalized career guidance to users. By leveraging their academic background and interests, the application effectively suggests industries and job roles that align with individual preferences.

User Engagement: During the walkthrough, users expressed positive feedback about the user interface's ease of use and the interactive nature of the application. The engaging experience encouraged users to explore various industries and job opportunities.

Relevant Industry Suggestions: The application's interest matching algorithm displayed relevant and suitable industries based on users' profiles. Users found the industry suggestions to be accurate and reflective of their career interests.

Informative Industry Statistics: The statistical data on industries, including job growth rates and average salaries, provided valuable insights for users in understanding potential career prospects in various sectors.

Search Functionality: Users appreciated the ability to search for specific job roles within the suggested industries. The job finding feature facilitated a more focused approach to exploring potential career paths.

Limitations: While the application performed well in providing personalized guidance, some users expressed the desire for more industries to be included in the database. Additionally, real-time data availability for industries was identified as an area for future improvement.

The walkthrough data and results indicate that JobFit Explorer successfully addresses the challenge of navigating the job market and assists users in making informed career decisions. By tailoring recommendations and offering industry insights, the application contributes to promoting Decent Work and Economic Growth by fostering a better match between individuals' skills and job opportunities. Future enhancements could focus on expanding industry coverage and integrating real-time data to further improve the application's effectiveness and reach.

VI. CONCLUSION AND FUTURE WORK

CONCLUSION

JobFit Explorer is a job finder application designed to address the challenge of career navigation and help individuals find suitable industries and job opportunities based on their academic background and interests. The application aims to contribute to the United Nations Sustainable Development Goal 8, Decent Work and Economic Growth, by facilitating better matches between individuals' skills and job opportunities.

Throughout the development of JobFit Explorer, several key features and functionalities were implemented to achieve its objectives. These include interest matching, industry suggestions, information on top-performing industries, job finding capabilities, and industry statistics generation. By providing personalized career guidance and insights into relevant industries and job roles, the application seeks to empower users in making informed decisions about their careers.

FUTURE WORK

While JobFit Explorer has been developed to address the initial scope, there is potential for further enhancements and future work to improve the application's effectiveness and reach. Here are some areas for consideration:

1. Real-time Data Integration: To enhance the accuracy and relevance of industry and job role recommendations, the application can explore ways to integrate real-time data on job trends, market demands, and salary information. Partnering with relevant industry associations and labor market agencies could provide access to up-to-date information.

2. Expanded Industry Coverage: Currently, the application focuses on a select number of industries, including Medical, Business, Technology, Engineering, and Creatives. Future work could involve expanding the industry coverage to include additional sectors to cater to a broader range of users.

3. Collaboration with Educational Institutions: Partnering with educational institutions can facilitate a more seamless transition for students and graduates from academia to the job market. Integrating the application's features into career counseling services at schools and universities can help students make better career decisions from an early stage.

CONTRIBUTION TO SDG 8

JobFit Explorer's contribution to Sustainable Development Goal 8, Decent Work and Economic Growth, lies in its ability to foster better alignment between individuals' skills and job opportunities. By providing personalized career guidance and insights, the application empowers individuals to make informed decisions, reducing skills underutilization and dissatisfaction in the job market. As a result, the application can contribute to creating more decent and fulfilling work opportunities, driving economic growth, and supporting overall social development.

JobFit Explorer's development and potential future improvements exemplify the application of technology in addressing real-world challenges and supporting sustainable development goals. By helping individuals find suitable and fulfilling careers, the application plays a role in shaping a more inclusive and prosperous society.

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