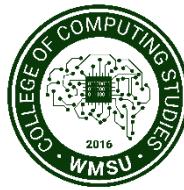




Republic of the Philippines  
Western Mindanao State University  
**College of Computing Studies**  
DEPARTMENT OF COMPUTER SCIENCE  
Zamboanga City



## **An Implementation of a Personalized Job Recommendation System to Enhance User Engagement and Job Search in Pagadian City**

A Thesis presented to the faculty of  
Department of Computer Science  
College of Computing Studies

In partial fulfillment of the requirements for the degree of  
Bachelor of Science in Computer Science

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November 21, 2024

Western Mindanao State University  
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Zamboanga City

### Approval Sheet

The Thesis attached hereto, entitled "**An Implementation of a Personalized Job Recommendation System to Enhance User Engagement and Job Search in Pagadian City**", prepared and submitted by Nicko M. Balboa, France Jell J. Jurane, and Angelito S. Piedad Jr., in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science, is hereby **recommended for Oral Examination**.

**Jonrey L. Lumayag**  
Adviser

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**APPROVED** by the Oral Examination Committee on **November 21, 2024** with a rating of  
**PASSED.**

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Dean, External Studies

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## ABSTRACT

In the rapidly evolving landscape of employment opportunities, the effective matching of job seekers with suitable positions remains a significant challenge. This thesis presents the implementation of a Personalized Job Recommendation System designed to enhance user engagement and streamline the job search process in Pagadian City. Leveraging advanced algorithms and user data, the system offers tailored job recommendations based on individual preferences, skills, and career aspirations. The system aims to address the gap between job seekers and employers by providing personalized job suggestions that align with users' profiles and interests. Through a combination of quantitative analysis and qualitative feedback, this study evaluates the effectiveness and user satisfaction of the system in facilitating job discovery and application. The findings demonstrate the potential of personalized recommendation systems to improve user experience and optimize job search outcomes in local employment markets. Overall, this research contributes to the advancement of technology-driven solutions for enhancing labor market efficiency and empowering job seekers in their career pursuits.

**Keywords:** job portal, personalization, online job posting, recommendation system, rule-based algorithm, job search, user engagement.

# **CHAPTER I**

## **INTRODUCTION**

### **Background of the Study**

Job search can be a challenging and time-consuming task, especially for individuals who are not sure which jobs they should apply for. According to [1], choosing a suitable candidate by comparing their resume with a set of job requirements can be a challenging, tedious, and time-consuming process. However, it is crucial for identifying pertinent information and valuable qualities that signify a strong candidate. Traditional job search methods, such as browsing job boards and attending job fairs, can often feel overwhelming and unproductive because they prioritize the number of job openings over the quality of matches. Job boards, for example, typically have thousands of listings that may not be relevant to the job seeker's skills, interests, or experience. This can lead to a feeling of devastation and frustration as the job seeker sifts through countless job postings, often with little success. Similarly, attending job fairs can be time-consuming and unproductive if the job seeker does not find employers who are seeking their specific skills or experience. This can result in a feeling of disappointment and discouragement, which can further decrease the job seeker's motivation to continue their job search. To address this problem, personalized job recommendation systems have been developed to help job seekers find relevant job opportunities more efficiently.

An online job portal is a web-based platform that connects job seekers with potential employers. It provides a centralized location for job postings and allows job seekers to upload their resumes and apply for jobs online. Employers can post job openings and search for candidates based on various criteria, such as skills, education, and experience. Online job portals have become a popular tool for both job seekers and employers, as they offer convenience and accessibility for job search and recruitment. For job websites examples, the Jobstreet is considered as one of the best implemented job portals in the Philippines. On Jobstreet, job seekers can utilize their career profile to apply for various job opportunities available on the site. Additionally, they can also attach their resumes automatically to their job applications. However, according to [2], the managers of Jobstreet.com should continue to enhance their website development, particularly in areas where

the study found lower mean scores. These areas include improving the website's display design, ensuring the accuracy of job vacancy information, and providing prompt feedback to users. Implementing these improvements can boost user trust in Jobstreet.com, increasing the likelihood of job seekers finding suitable employment through the website [2]. Another job website example is the LinkedIn. LinkedIn Jobs is merely a component of the broader LinkedIn platform, which functions as a massive networking platform designed for professionals. Unlike traditional social media platforms, LinkedIn profiles serve not only as a way to share information with recruiters but also as a networking profile. LinkedIn's capabilities extend beyond job searches and also include connecting, collaborating, learning, and participating in other ways. As a professional social networking platform, it enables users to share posts, news, and blog articles that showcase their expertise and experiences, allowing other users to engage with them. LinkedIn also offers a chat feature, which allows users to connect and discuss with recruiters, colleagues, or even experts in their field [3]. Another example of an online job portal is the Jobster. The jobster is a platform that assists both job seekers and recruiters in finding suitable employment and employees, respectively. Job seekers can upload their CVs, and representatives of companies can access and search the information provided by job seekers [11]. There are actually numerous job portals that are available online, catering to various industries and job seekers with different qualifications and experience levels. While there are many options, only a few are commonly used or well-known, depending on their popularity, reputation, user interface, features, and effectiveness in connecting job seekers with potential employers.

In addition, the term "personalized" refers to a job recommendation system that is tailored to the individual user's preferences, skills, and experience. In other words, personalized job recommendations have several advantages over traditional job search methods. First, they save users time by presenting them with job opportunities that are more relevant to their skills and preferences. Second, they increase user engagement by providing a more personalized job search experience. Finally, they improve job search efficiency by reducing the number of irrelevant job recommendations that users have to sift through.

Pagadian City is a scenic coastal town situated in the western region of Mindanao Island in the Philippines. It is recognized as the capital of the province of Zamboanga del Sur and is famous for its stunning seashores and cultural

legacy. This town is also home to a large number of residents, with a population of around 156,923 according to the latest census conducted in 2020. Unfortunately, this high population density has led to the challenge of unemployment and underemployment, causing many citizens to struggle with earning a sustainable income and making a living. In Pagadian City, job seekers face similar challenges in their job search. Finding a job in Pagadian City is really tough as there are a lot of people competing for the same opportunities. It's important for job seekers to have a way to find job openings that match their skills and preferences, but unfortunately, there's no personalized job recommendation system currently available to help with this. The development and implementation of a personalized job recommendation system has not yet been explored. Moreover, job market has undergone significant changes in recent years, with the advent of technology and the internet playing a major role in shaping the way job seekers search for and apply to job opportunities. Online job portals have become a popular destination for job seekers to find and apply to job openings, as well as for employers to advertise job openings and recruit potential candidates.

Overall, the implementation of a personalized job recommendation system has the potential to provide significant benefits to job seekers in Pagadian City and could serve as a model for similar systems in other regions. The implementation of a personalized job recommendation system in Pagadian City can have significant implications for both job seekers and employers. By providing job seekers with more relevant and tailored job recommendations, the system can increase user engagement and satisfaction, while also helping employers find suitable candidates more efficiently.

## **Statement of the Problem**

The problem that an implementation of a job portal may aim to address is the inefficiency and ineffectiveness of job search process through the portal. Other issues that could be studied could include:

- Competition of applicants to apply for a specific job.
- Lack of relevant job opportunities.
- Difficulty in applying to job.

## **Objectives**

### **General Objectives**

The general objective is to develop a Personalized Job Recommendation system that aims to provide job seekers with more relevant and tailored job recommendations, to increase user engagement and satisfaction, and to help employers find suitable candidates more efficiently.

### **Specific Objectives**

Specifically, this study aims:

1. To develop a user interface for the job recommendation system that is easy to use and accessible to job seekers.
2. To solve the issue of applicants competing to apply for a specific job by providing them a ranking percentage and using techniques such as rule-based systems.
3. To decrease the time-consuming task of job seekers searching for a certain job that fits their preferences.
4. To make a specified job posting or job board inaccessible once a number of required applicants has already reached.
5. To implement a production rule-based algorithm for the Job Recommendation System.

## **Scope and Limitations**

### **Scope**

- The system was designed to enhance user engagement and job search by providing personalized job recommendations based on the user's educational attainment, skills, experience, and preferences.
- The evaluation of the system was conducted through user surveys and interviews to measure its effectiveness in enhancing user engagement and job search.
- The system shall only focus on job offerings that are available in Pagadian City.
- The system doesn't accept applicants who reside outside of Pagadian City that are seeking to apply for a certain type of job.

- The system utilizes Visual Studio Code as a text editor and PHP as the programming language.
- The system also investigates the effectiveness, user-friendly, reliability, and efficiency of the job portal to enhance user engagement for the job seekers.

## **Limitations**

- The system did not include an analysis of the economic or social impact of the personalized job recommendation system in Pagadian City.
- The researchers were not able to include the creation of job portals to cater to other job offerings in other cities or regions.
- The system relies heavily on the quality and accuracy of input data which may result in less effective recommendations if the data is incomplete or outdated.
- Limited testing was conducted, and the system's performance in large-scale implementations or with diverse user groups remains unverified.

## **Significance of the Study**

The development of Job Portal may be most beneficial to the following:

- Job Seekers - The main beneficiary of the study. The job seekers are important for understanding their behavior, preferences, and needs in the job search process. This information can be used to improve the design and functionality of job portals to better match job seekers with available positions.
- Employers - The employers in job portals are important for understanding the recruitment and hiring practices of organizations, as well as the availability on types of job openings they have. This information can be utilized in order to improve job search strategies for job seekers and to inform the design of job portals to better match job seekers with available positions.
- Job Market Researchers - Online job portals generate a vast amount of data on job trends, employment opportunities, and labor market insights. Job market researchers can use this data to track job market dynamics and analyze the supply and demand for different types of jobs.
- Government Agencies - Online job portals can be a valuable source of information for government agencies to track employment trends and inform

policy decisions related to job creation, workforce development, and economic growth.

- Educational Institutions - Online job portals can provide educational institutions with insights into the skills and qualifications that employers are seeking in job candidates. This information can inform their curriculum development and career services offerings to better prepare students for the job market.
- Recruitment agencies - Online job portals provide recruitment agencies with a platform to find potential candidates for their clients. They can search for candidates based on specific criteria and match them with job openings.
- Future Researchers - The system can benefit the future researcher/s guide for reference in their own efforts at any proposal or project.

## Definition of Terms

This section clarifies the meanings of key terms, concepts, and variables used in the research. It ensures that readers understand the terminology used in the study, reducing confusion and improving communication.

Terms	Definition
<b>1. Implementation</b>	The process of putting a plan or system into effect, in this case, the execution of a personalized job recommendation system in Pagadian City.
<b>2. User Preferences</b>	The specific desires, requirements, or criteria that individuals have regarding their job preferences, including factors such as industry, location, salary, and company culture.
<b>3. User Engagement</b>	The degree to which users interact and engage with a system, often measured by metrics such as time spent, frequency of visits, and level of participation.
<b>4. Usability</b>	The ease with which users can navigate, interact with, and accomplish tasks within the personalized job recommendation system, often evaluated through user testing and interface design assessments.
<b>5. Recommendation System</b>	A software tool or mechanism that suggests or proposes items of interest to users based on their past behavior, preferences, or similarities with other users.
<b>6. Algorithm</b>	A set of rules or instructions designed to solve a specific problem or perform a particular task, used in this research to analyze user data and generate personalized job recommendations.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

#### **Related Studies**

In today's world, establishing and maintaining a successful business can be a challenging task [4]. To achieve this, it is necessary to adopt an analytical approach and develop an effective business model that is both efficient and intelligent. The primary aim of this study is to analyze and assess the effectiveness and efficiency of different machine learning algorithms in the context of an Online Job Portal Using Production Rule-Based Algorithms. The system utilizes production rule-based algorithms to efficiently gather and organize data. It operates in three phases: first, it automatically collects data from the web and optimizes the database for the production rule-based algorithms. Second, it sends job notifications to job seekers based on their preferences and the available job data. Finally, it groups similar jobs together using a production rule-based algorithm to understand current job market demand. As a result, this system functions by gathering job vacancies and comparing them with the preferences of job seekers, streamlining the job application process for them.

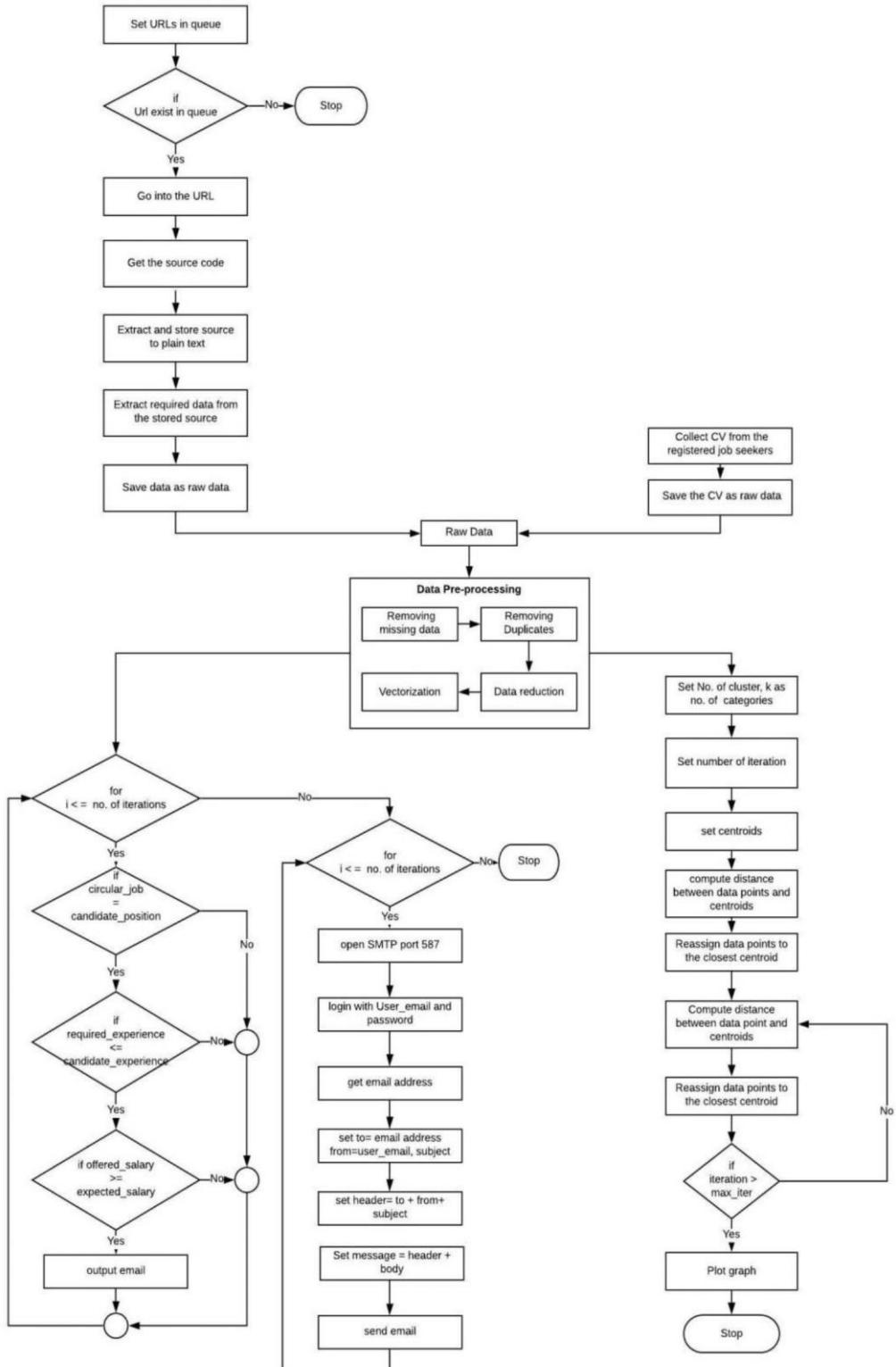
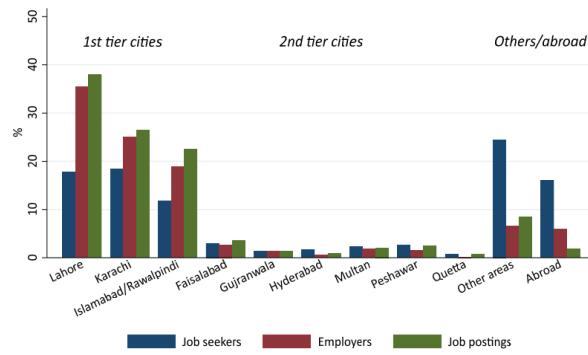
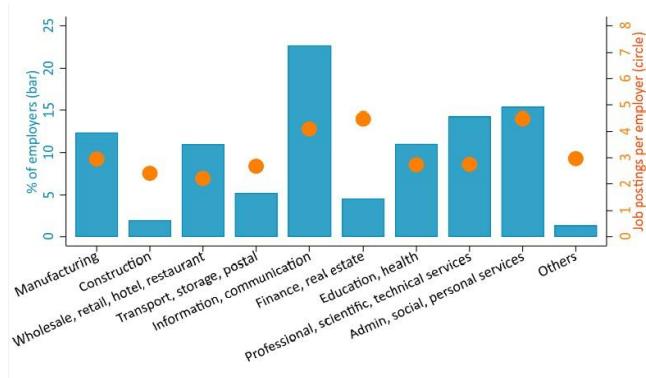


Figure 2.1: System Diagram

This study which is conducted by [8], it utilizes dataset containing information from 5 million jobseekers, 108,000 employers, and 412,000 job postings on the Rozee.pk platform. Illustrated in figure 2.2 the important analysis in which data includes four types of datasets: jobseekers, employers, job postings, and transactions. The jobseeker dataset provides detailed information on demographics, education, work experience, skills, and salary expectations. The employer dataset contains information from their profiles on the platform. The job posting dataset includes all relevant information from job postings, such as job descriptions, qualifications, and salary ranges. Figure 2.3 shows the distribution of firms and the number of job postings per firm over industries. The transaction dataset records all applications, including which jobs were applied for, when, and by whom. It also includes some information on application results, such as who was shortlisted.



*Figure 2.2: Geographical distribution of jobseekers, employers, and job postings*



*Figure 2.3: Distribution of firms and the number of job postings per firm over industries*

This system helps job seekers customize their job search to their needs and understand the company's goals. Illustrated below in Figure 2.4, the User Interface of the mentioned system. [9] stated that the main benefits of using online job platforms are that they are easy to use and don't cost anything. Job seekers can upload their CVs (Curriculum Vitae) to multiple websites for free and search for job openings. This system uses natural language processing to help job seekers find relevant job opportunities. The tool uses different filters like job title, location, and skills to improve the search results. It also uses machine learning to analyze resumes and extract relevant information like skills, experience, and education. The tool constantly updates and scans for new talent and generates related job titles and skills to match job seekers with the right opportunities. As a result, the Natural Language Processing project is a career platform that helps job seekers and recruiters. The platform stores information about job vacancies, including the required skills, technology, and interview dates. Job seekers can view the available jobs and apply for them. Recruiters can choose the best candidates based on their qualifications and test results. An admin manages the platform for both job seekers and recruiters. However, some important services can enhance one's work profile, like resume creation and visibility services. These services aim to cater users with a platform in order to access great opportunities, such as matching job seekers with potential employers or connecting talented individuals with each other.

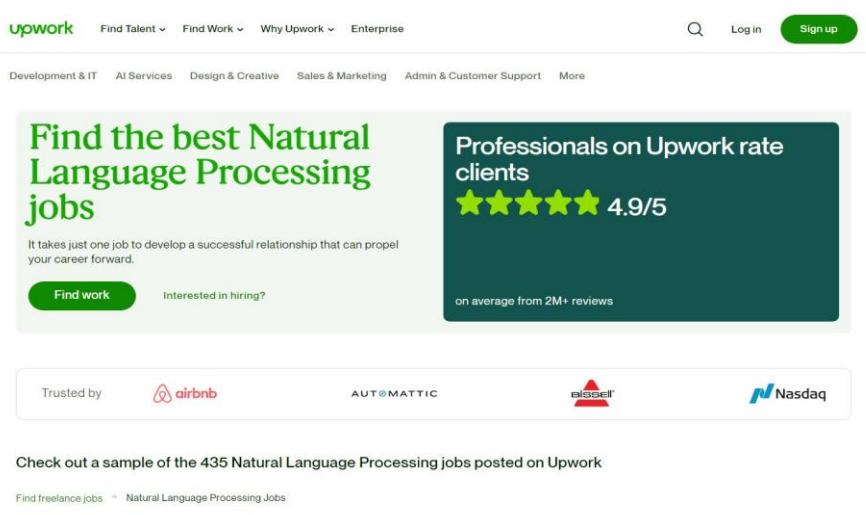
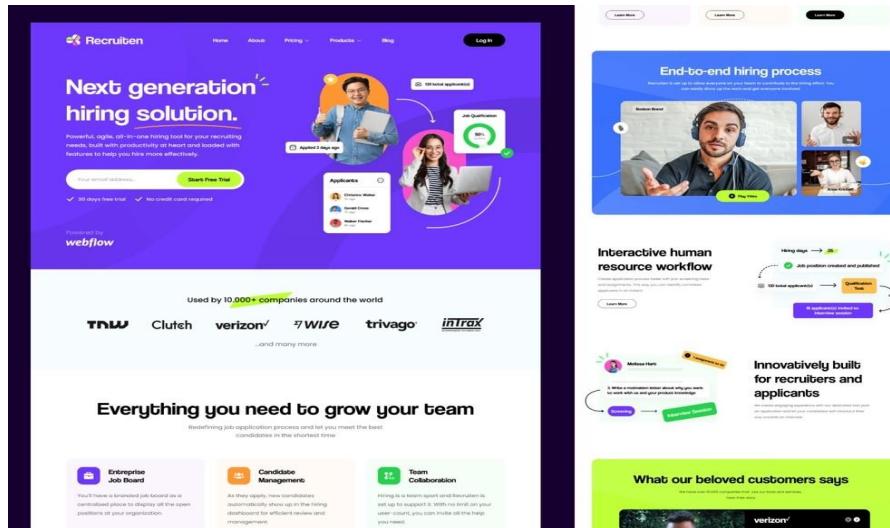


Figure 2.4: User Interface of upwork

In today's tech-driven world, the internet has become the primary source for job seekers, and this project aims to bridge the gap between job seekers and recruiters [10]. The WISDM methodology has been used to create a web portal that considers the requirements of both job seekers and recruiters and applies filters to meet their individual needs. The automated mailing system keeps everyone informed about their application status, company, designation, and department. Bootstrap has been used to ensure easy compatibility across different devices. The software production principles have been implemented throughout the system. The online job portal has been developed on the ASP.NET platform, providing an efficient search for job vacancies. Its main goal is to produce graduates who meet industry requirements, but it is important to note that job portals cannot solve all problems related to unemployment among graduates. Figure 2.5 shows the User Interface of E-Recruitment Portal.



*Figure 2.5: User Interface of E-Recruitment Portal.*

An online job portal is a platform that assists both job seekers and recruiters in finding suitable employment and employees, respectively. Job seekers can input their educational qualifications, work experience, and job preferences, and the portal can display a list of potential companies. This online tool can be used to help unemployed people by connecting them with job opportunities and assisting those who are looking for work. Job seekers can upload their CVs, and representatives of companies can access and search the information provided by job seekers. However, it's important to note that job portals cannot entirely solve the issue of unemployment [11]. The project aimed to enhance online job portals by addressing the problems encountered in the existing system, including helping fresher candidates select appropriate career paths by

administering an aptitude test. Shown in Figure 2.6, the User Interface of the online job portal named Jobster.

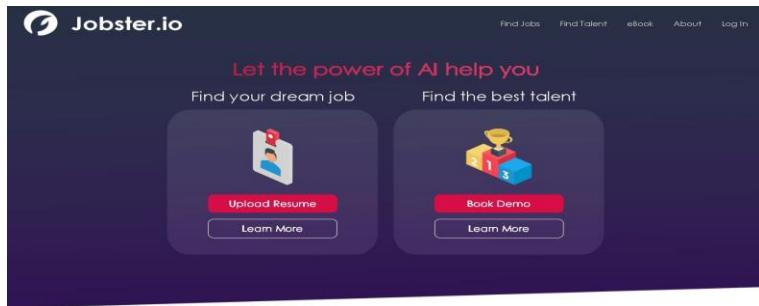


Figure 2.6: User Interface of Jobster

The internet has revolutionized the way people search for job vacancies, with print media being replaced by websites such as JobStreet. [2] stated that JobStreet provides a powerful and efficient matching system, with job ads containing all the necessary information for serious candidates. A quantitative approach was used in the study, with a descriptive research type aimed at describing and explaining the findings. The researchers suggest that JobStreet managers continue to innovate in website development, particularly in areas with low mean scores, such as improving website design, job vacancy information accuracy, and user feedback. By doing so, it can increase user trust in Jobstreet.com and improve the chances of users finding employment opportunities. Illustrated below in Figure 2.7, the User Interface of Jobstreet.

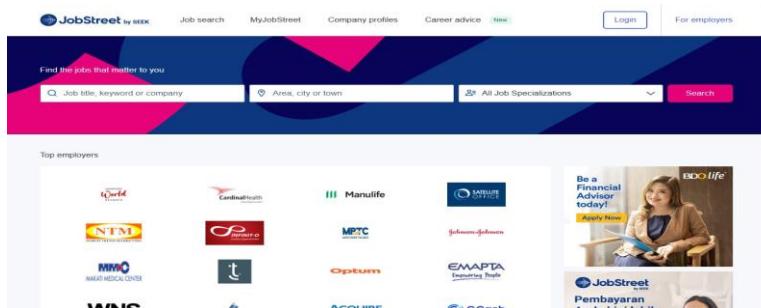


Figure 2.7: User Interface of JobStreet

LinkedIn, a social media platform established in 2003, has become immensely popular among job seekers and employers for finding jobs and competent candidates. As the only job-related social media platform, LinkedIn offers various features to its users, such as creating and storing resumes, making connections, endorsing skills, advertising job openings, and more. This platform is particularly popular among recent graduates, newly employed individuals, and employers due to its unique nature. A study

conducted by [3], it have utilized practical observations to investigate the employers' perception of LinkedIn in terms of recruitment. The results suggest that LinkedIn is a complementary recruitment tool. Moreover, the study revealed that employers preferred candidates who had sufficient job-related information, skills, and expertise, and whose information on LinkedIn matched their CVs/resumes. Figure 2.8 shows the User Interface of LinkedIn.

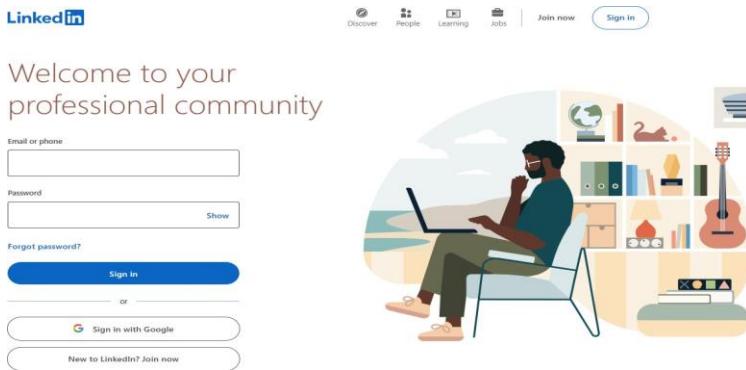


Figure 2.8: User Interface of LinkedIn

Today, students are often asked about their future career choices, but many lack awareness of the job opportunities available in various industries, making it difficult to choose the right courses or programs when applying to universities. Study conducted by [12] aims to develop a mobile application that helps students discover career paths aligned with their educational backgrounds. The app utilizes Rule-Based Filtering to provide personalized career recommendations based on students' qualifications. Built using the Mobile Application Development Life Cycle (MADLC), which includes identification, design, development, and testing phases, the app was developed with Visual Studio Code and Flutter, while Firebase serves as the backend for data storage. The system was tested to ensure its functionality, offering students guidance in making informed decisions about their future careers, ultimately helping them save time and reduce the risk of choosing the wrong path.

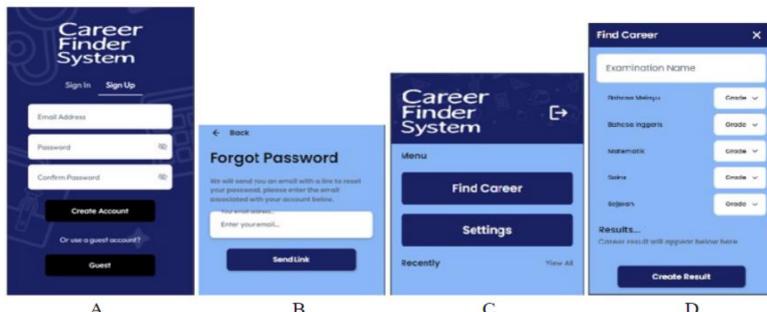
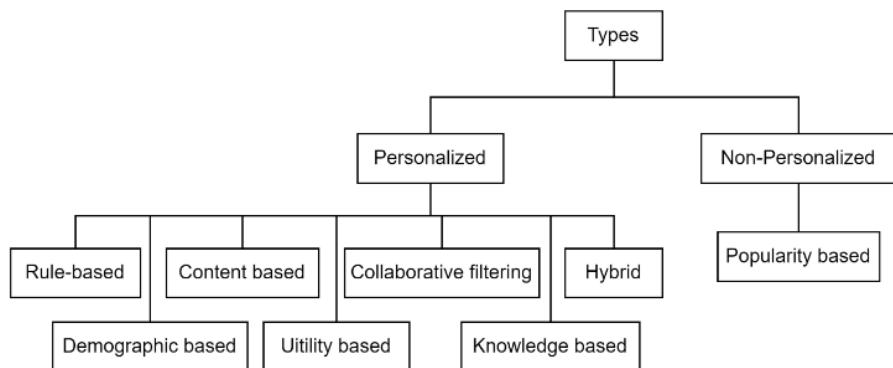


Figure 2.9: User Interface of Career Finder System

Recommender systems are specialized information filtering tools designed to deliver items from a vast collection that users are likely to find interesting or useful. [13] stated that there are two main types of recommender systems: personalized and non-personalized. Personalized recommendation systems analyze user data in detail to provide customized suggestions tailored to each individual. Common examples of personalized systems include rule-based, content-based, and collaborative filtering methods. On the other hand, non-personalized recommendation systems, such as popularity-based recommenders, suggest the most popular items to all users. This section explores various recommendation techniques as illustrated below in Figure 2.10.



*Figure 2.10: Types of Recommendation System*

Rule-based recommendations classify datasets using a set of "IF...THEN..." rules. The IF clause, known as the precondition, outlines the conditions or events that must be met before an outcome occurs, combining specific characteristics. The THEN clause represents the consequence of the rule, indicating the classification results as either positive or negative. Developing an effective rule-based recommendation system can be challenging, as it requires extensive background knowledge. The best approach involves validating the problem, validating the data, choosing between a "one-by-one" or final decision strategy, creating well-informed rules, writing the necessary code, and iterating based on the results. By following these steps, the system can provide accurate and reliable recommendations.

## Summary

The use of personalized recommendation systems has become increasingly popular in recent years. These systems leverage user data to provide personalized recommendations that can enhance user engagement and satisfaction. In the context of job search, personalized recommendation systems can help job seekers find job

opportunities that match their skills and preferences.

Existing studies have explored various approaches to implementing personalized recommendation systems for job search. Some studies have focused on collaborative filtering techniques, which rely on user behavior data to identify patterns and make recommendations. Other studies have explored content-based recommendation systems, which analyze job descriptions and user profiles to make recommendations. In addition to recommendation techniques, studies have also examined various factors that influence the effectiveness of personalized job recommendation systems, including user satisfaction, engagement, and perceived usefulness. These factors can be affected by the quality and relevance of recommendations, as well as the user interface and user experience design.

## Synthesis

The researchers' study presents advantages over the existing systems discussed in the related literature review (RRL). The advantage of the researcher's study over those existing systems is shown in Figure 2.11 which provides a simple synthesis on understanding the system. Researchers are solving the issue of applicants that are competing to apply for a specific job by providing them a ranking percentage upon applying.

Features	Job Portal using NLP	Recruiten	Jobster	JobStreet	LinkedIn	VS JRS (Job Recommendation System)
CV/Resume Upload	✓	✓	✓	✓	✓	✓
User Friendly Interface	✓	✓	✓	✓	✓	✓
User Engagement	✓	✓	✓	✓	✓	✓
Accept/Reject Status for Applicants	X	X	X	✓	✓	✓
Ranking Percentage Competition Upon Applying	X	X	X	X	X	✓

Figure 2.11: Synthesis

## Conceptual Framework

As shown in figure 2.12, the input includes the essential factors such as user's educational attainment, skills, and experience. The feedback from the users is also collected through surveys and interviews to enhance the system's performance. Additionally, the process involves collecting user's data, training the algorithm by pre-defined rules, and evaluating the effectiveness and efficiency of the system

through user feedback. Thus, the output of the system includes the job recommendations based on the user's data, a user-friendly interface, and insights for job portal developers, job seekers, and employers on how to improve the job search experience.

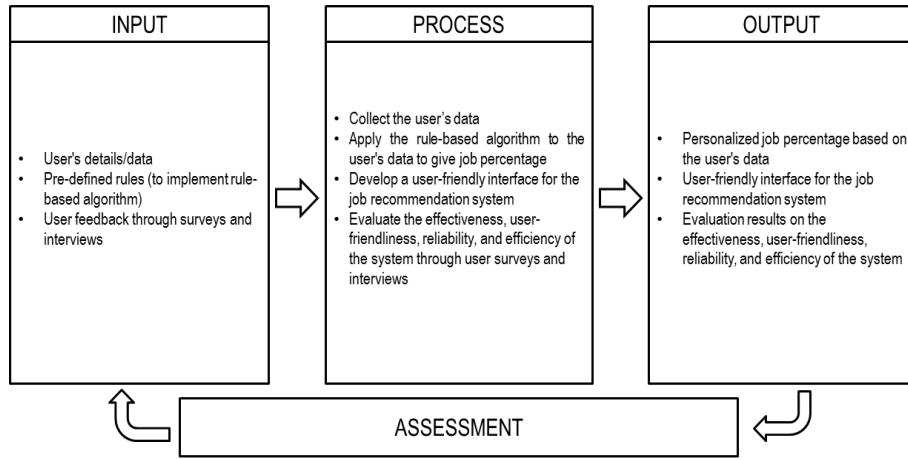


Figure 2.12: Input Process Output

## **CHAPTER III**

### **METHODOLOGY**

This chapter discusses the methodology used for the development of a Personalized Job Recommendation System to Enhance User Engagement and Job Search in Pagadian City.

#### **Research Design**

On this system, a mixed-methods research design was deemed most appropriate, as it combined both quantitative and qualitative research methods.

Quantitative research methods allowed the researchers to gather numerical data about the effectiveness of the job recommendation system in enhancing user engagement and job search in Pagadian City. The researchers used survey instruments, such as user feedback, to measure the frequency of system usage, the number of job recommendations viewed by users, and the time spent on the system by users.

Qualitative research methods were beneficial for the researchers. To gain a deeper understanding of the user experience of the personalized job recommendation system, the researchers conducted focus interviews to collect detailed feedback on various aspects of the system, such as usability, relevance of job recommendations, and user satisfaction. This approach enabled the researchers to comprehend how users utilized the system, their perspective on its usefulness, and areas that required improvement.

Incorporating a mixed-methods research design allowed the researchers to gather both quantitative and qualitative data to assess the effectiveness of the personalized job recommendation system. By combining both approaches, the researchers obtained a comprehensive understanding of the system's impact on user engagement and job search in Pagadian City.

#### **Respondents**

The target respondents of this study are the employers from private sector and government agency, and the job seekers who are fresh graduates from college and non-fresh graduates in Pagadian City. They are grouped according to private and public sectors please refer to Table 3.1 and fresh graduates and non-fresh graduates, please refer to Table 3.2. The respondents were selected using purposive sampling. Purposive sampling is a

non-probability sampling technique where the units are selected because they have the characteristics that you need in your sample. In other words, units are selected “on purpose” in this sampling technique.

### **Population and Sample Distribution of Respondents**

EMPLOYERS	POPULATION	SAMPLE	PERCENT DISTRIBUTION
Private Sector	293	5	1.71%
Public Sector	3,167	5	0.16%
<b>GRAND TOTAL</b>	<b>3,460</b>	<b>10</b>	<b>1.87%</b>

*Table 3.1: Population and Sample Distribution of Employers*

The table 3.1 shows the actual number of employers that has actually participated voluntarily in the survey. Out of 293 employers from private sector, only 5 selected employers have participated in the conduction of this study. While, 5 out of 3,167 public sectors selected employers have participated in the research. To sum it up, the total population was utilized as employers of the study are 1.87 percent.

JOB SEEKERS	SAMPLE
Fresh Graduates	5
Non-fresh Graduates	5
<b>GRAND TOTAL</b>	<b>10</b>

*Table 3.2: Sample Distribution of Job Seekers*

As shown in Table 3.2 above, 10 job seekers voluntarily participated in the survey. Among them, 5 selected job seekers were fresh graduates who actively took part in this study. Additionally, 5 selected non-fresh graduate job seekers also participated in the research. In summary, the total number of respondents utilized as job seekers in the study is 10.

COMPANIES	EMPLOYER	PERCENT DISTRIBUTION
Public Employment Service Office (PESO)	1	1.11%
Extrematics Software Development	1	1.11%
MANTECH Computer Services	1	1.11%
Rakuboss Online Marketplace	1	1.11%
Pagadian Chamber of Commerce and Industry Foundation, Inc.	1	1.11%
Fortune Life Insurance Company, Inc.	1	1.11%
Jollibee – Pagadian City	1	1.11%
Metrobank – Pagadian City	1	1.11%
EMCOR – Tiguma Branch	1	1.11%
Des Appliance	1	1.11%
<b>TOTAL</b>	<b>10</b>	<b>100%</b>

*Table 3.3: Sample of Volunteer Employers per Company*

The table 3.3 above shows the actual number of employers per company who volunteered to participate in the conduct of the study. It shows that there are ten (10) employers from different companies participated in this study. Each of the ten (10) respondents from different companies, which give 11.11 percent or one (1) of the respondents, came from the company list in the table.

## Data Gathering Instruments, Techniques, and Procedures

In this study, a User Feedback Survey Questionnaire was used to gather feedback from the users. The questionnaire consists of 3 sections with 14 questions. The first section is focused on the respondent's information. The second section is the survey proper where the respondents can evaluate the design and user-friendliness, usability, efficiency, and relevance of job recommendation. The respondents can rate each item using a Likert's scale of 1 to 5 with 1 as the lowest as "Strongly Disagree", and 5 as the highest as "Strongly Agree". The respondents has the freedom to put a check mark (✓) based on what they have agreed. Finally, the third section asks for the suggestions and/or recommendations to comprehend how users are utilizing the system, their perspective on its usefulness, and areas that require improvement.

Rating	Verbal Interpretation
5	Strongly Agree
4	Agree
3	Neutral
2	Disagree
1	Strongly Disagree

Table 3.4: Interpretation of the Five-Point Likert Scale

To calculate the result or percentage of respondents who fall into specific response categories, this formula is used: **Percentage** =  $\left( \frac{\text{Number of Respondents in Category}}{\text{Total Number of Respondents}} \right) \times 100\%$

In the collection of the data, the researchers wrote a permission letter that needs an approval by the researcher's adviser. After the approval of the permission letter, the researchers immediately went to PESO Office. When gathering the data, the researchers have tackled first and discuss if what is our survey or research study all about. Then, the researchers' respondent voluntarily gave their permission to voluntarily participate to the researcher's study. Thus, a total of twenty (20) respondents voluntarily participated in the survey. After the interview, the researchers thanked its participants for freely volunteering to the study.

### **Analytical Tools**

This section discusses how the system is designed and how it works. It shows the system's diagrams illustrating how data moves, how information flows, how components interact, and how entities relate within the system.

### **Data Flow Diagram (DFD)**

The Context Diagram that is illustrated below in Figure 3.2 shows the interaction among key entities in the online job system. The Admin entity holds the authority to manage all aspects of the job portal, ensuring overall system integrity. Employers, with their defined roles, can seamlessly categorize jobs, post new job listings, register or log in, search for specific positions, and review and accept applicants. On the other side, Applicants are empowered to categorize job preferences, apply for listed positions, register or log in, search for opportunities, and track the status of their applications.

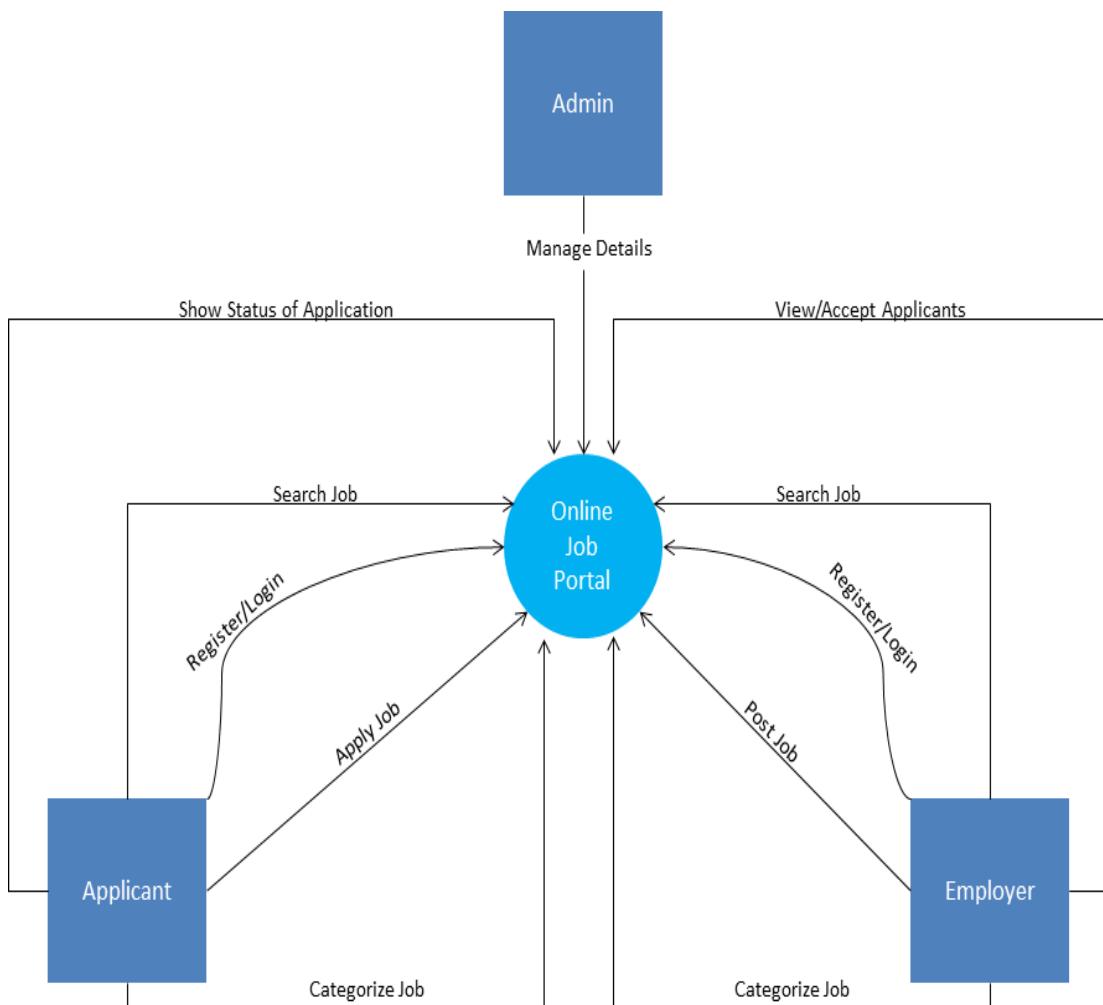


Figure 3.2: Context Diagram

The System DFD that is shown below in Figure 3.3 describes how an online job portal system works and it serves three main user roles: Admin, Applicant, and Employer. The system's primary function is to facilitate the job application process, job posting, and management of applicant and employer details. It acts as an intermediary platform where the applicants can search for and apply to job postings which are created by employers, with an Admin overseeing and managing the entire system.

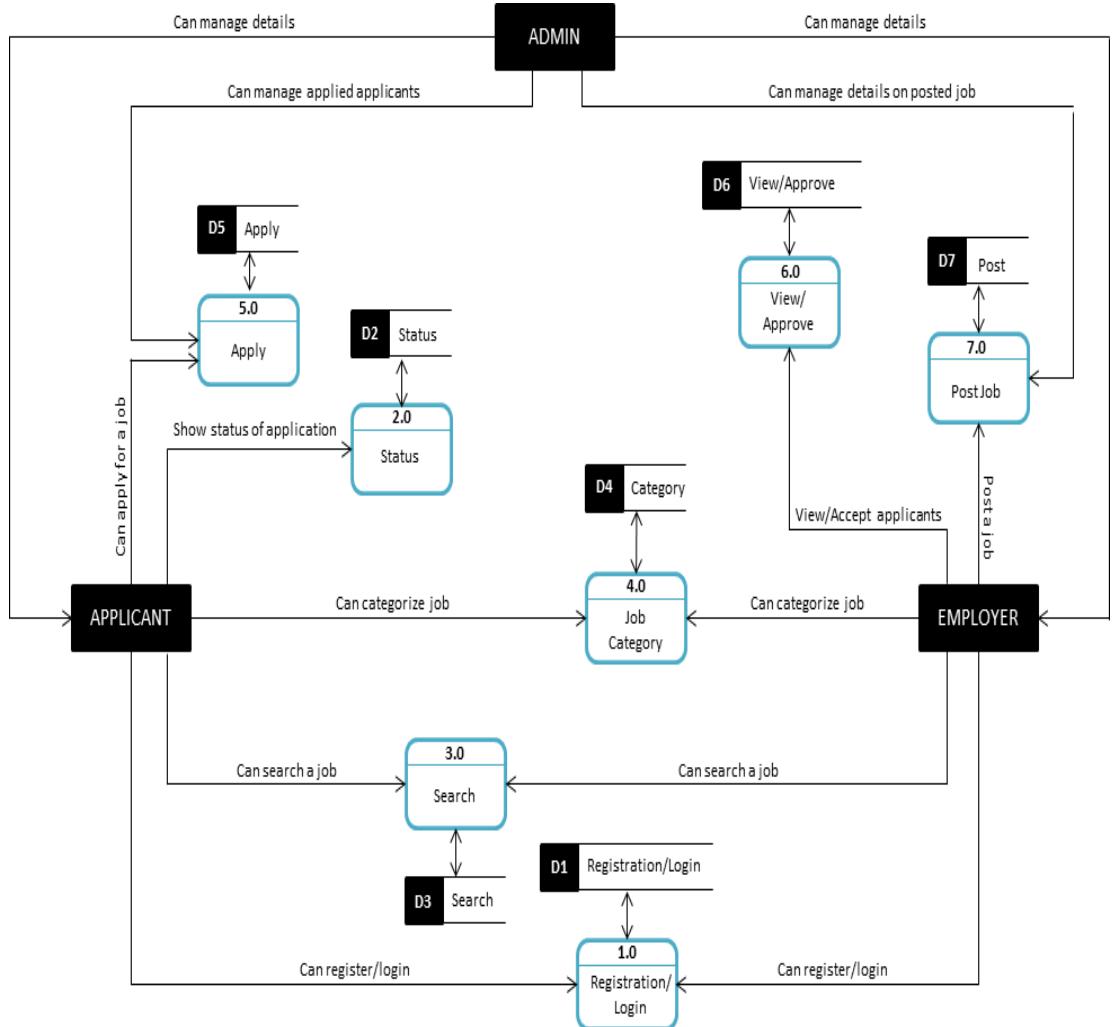
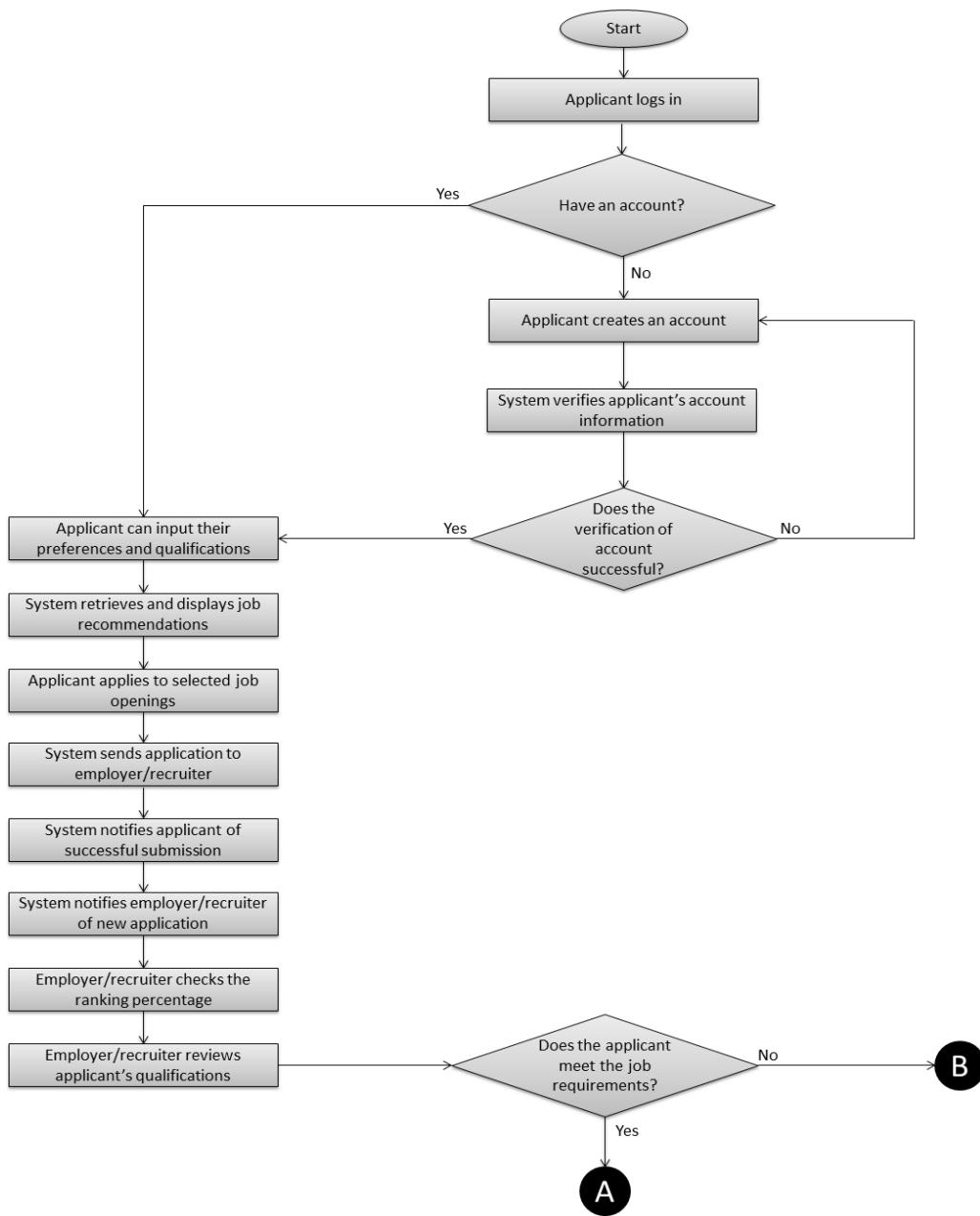


Figure 3.3: System Data Flow Diagram

## Flowchart

The flowchart that is shown in Figure 3.4, illustrates the systematic flow of activities within the online job system. The letters “A” and “B” indicate the continuation of the flowchart that can be shown in Figure 3.5.



*Figure 3.4: System Flowchart I*

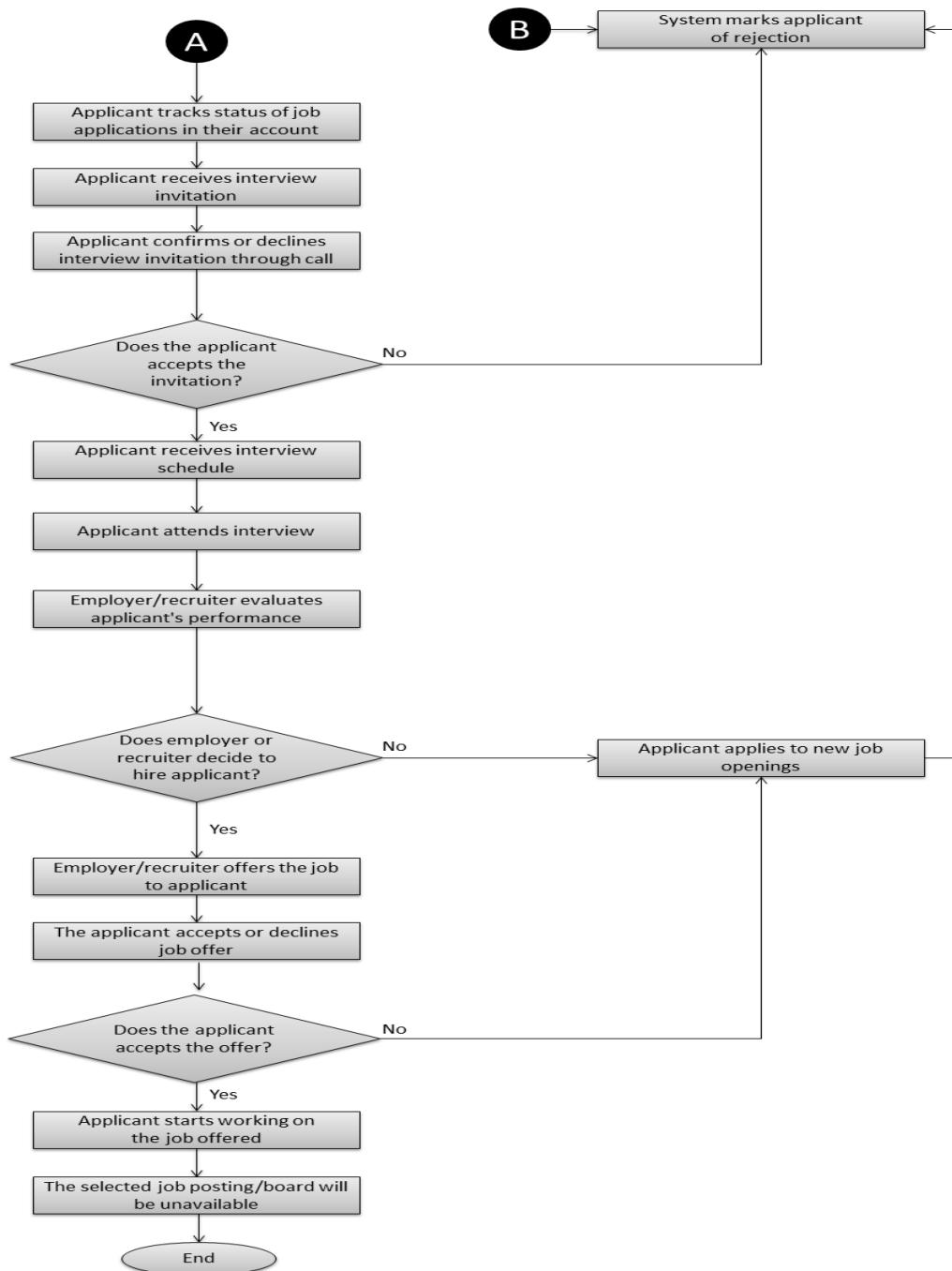


Figure 3.5: System Flowchart II

The flowchart above is like a map for the online job system. It shows how everything connects and works together. It is designed to make job searching and hiring smooth and clear. The flowchart above captures the seamless interaction between Admin, Employers, and Applicants, ensuring a well-organized and efficient workflow in the online job portal system.

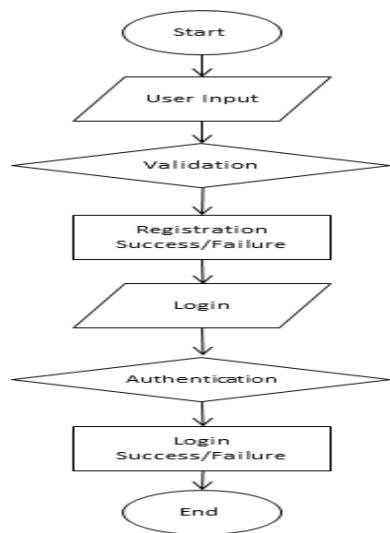


Figure 3.6: User Registration and Login Module Flowchart

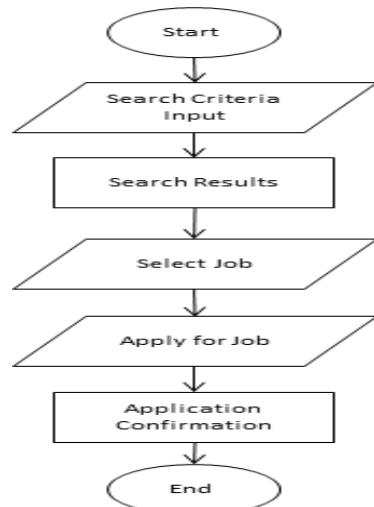


Figure 3.7: Job Search and Application Module Flowchart

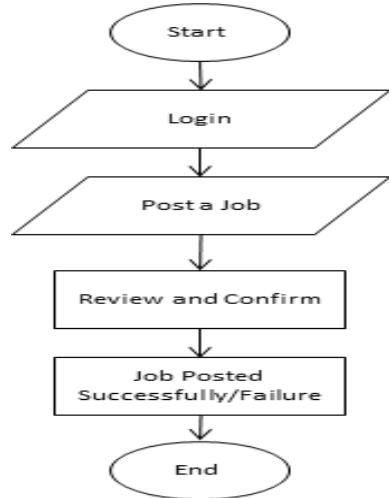


Figure 3.8: Employer Job Posting Module Flowchart

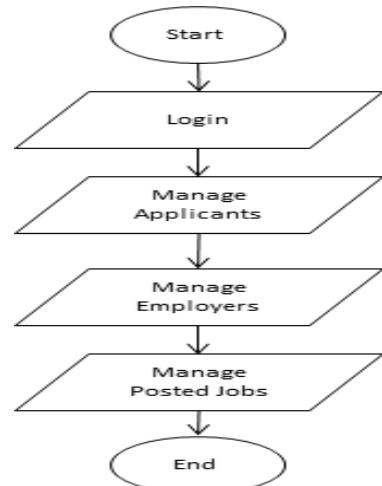


Figure 3.9: Admin Management Module Flowchart

## Entity Relationship Diagram

The ERD shown in Figure 3.10 captures the core entities involved in an online job portal system and it also illustrates how they are related. The ERD harmoniously maps out the interplay between Admin, Employers, and Applicants, fostering a well-organized and functional online job system. The Admin oversees everything. Employers, distinguished by their pivotal role, engage with the system to categorize jobs, post listings, register/login, search for positions, and manage applicants. Simultaneously, Applicants interact with the system by categorizing job preferences, applying for positions, registering or logging in, searching for opportunities, and monitoring the status of their applications. This diagram serves as a foundation for understanding the data structure and relationships within the job portal system. Therefore, it's a straightforward representation of how everyone connects and uses the online job portal.

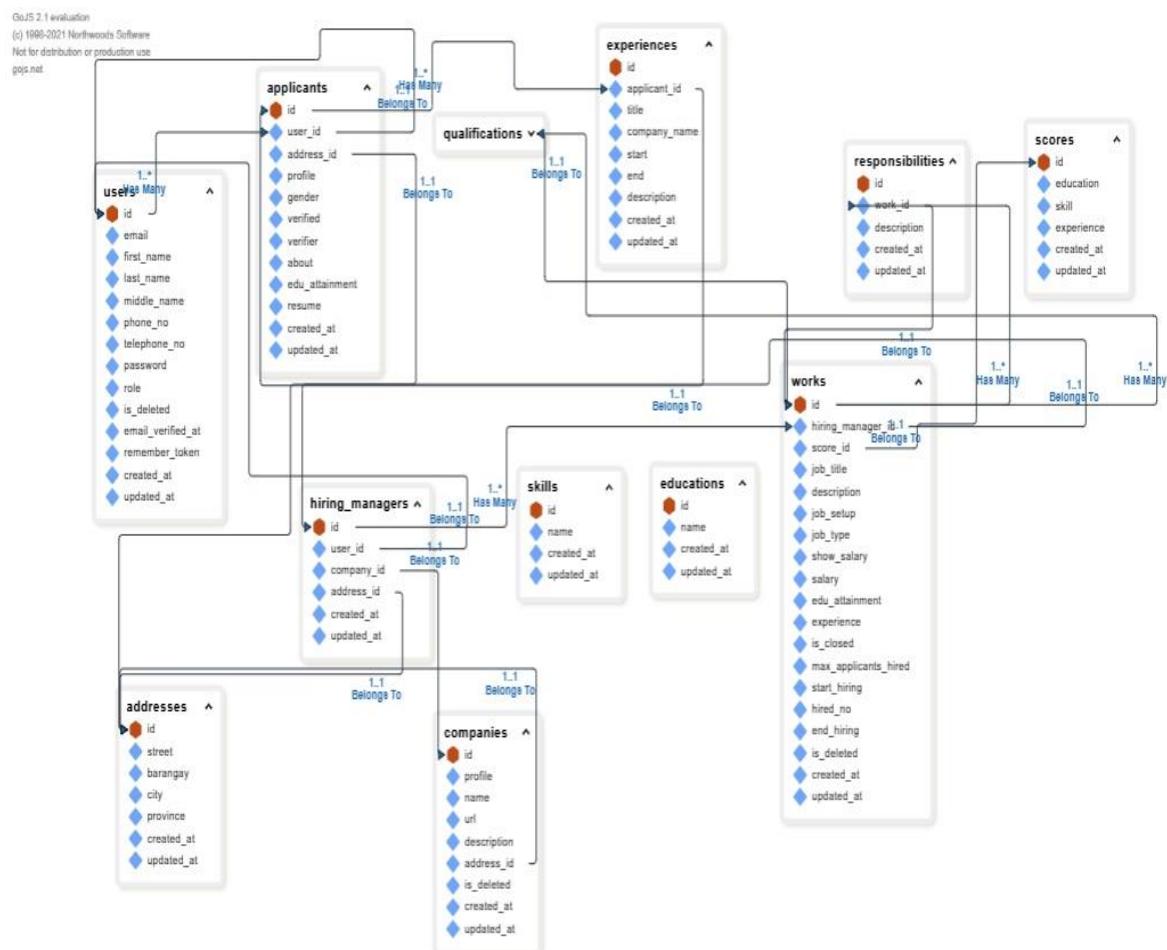


Figure 3.10: Entity Relationship Diagram

## Technical Tools

This section discusses the different tools and components used for the development and completion of the system.

### Hardware

The following are the hardware specification of the system:

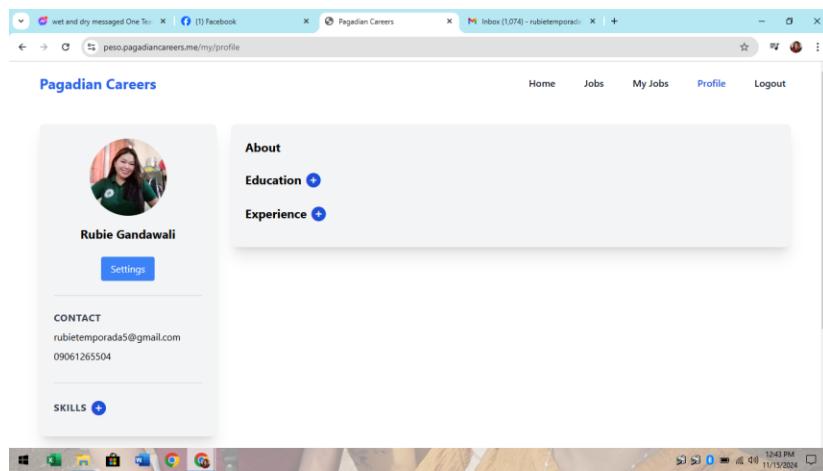
1. **Laptop:** A laptop is likely to be one of the primary devices used by the developers or researchers working on the implementation of the personalized job recommendation system. A laptop provides a portable and flexible computing platform that can be utilized in the concept of programming, testing, and data analysis tasks.

Processor: Intel Core i5

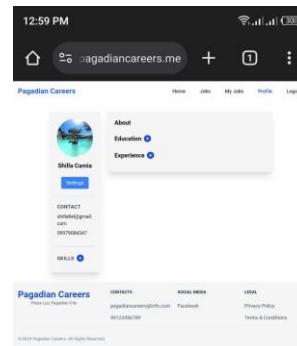
RAM (Memory): 12GB RAM or higher

Operating System: 64-bit operating system, x64-based processor

Storage: 128GB SSD (Solid State Drive) or higher



2. **Mobile Phones:** Mobile phones are ubiquitous and highly accessible devices that are often used for job searching and accessing online content. Therefore, it is important to consider the mobile experience when designing a personalized job recommendation system. By testing the system on mobile phones, the researchers can ensure that it is friendly or easy to use and navigate on a smaller screen.



## Display:

- Screen Size: At least 6.4 inches or higher
- Type: PLS TFT capacitive touchscreen
- Resolution: 720 x 1560 pixels
- Processor : Octa-core, 1.8 GHz, Cortex-A53
- RAM : 2GB or 3GB options
- Storage : 32GB internal storage or higher
- Operating System : Android 10, One UI 2.0 or higher

## Software

The following are the software specification of the system:



1. **Algorithm:** a Production Rule-Based Algorithm operates by employing a set of predefined rules to make decisions about job recommendations. These rules are typically formulated based on domain-specific knowledge and criteria such as job seeker preferences, qualifications, and available job listings. The algorithm evaluates each job seeker's profile against the established rules to determine the most relevant and suitable job recommendations.
2. **Programming Language:** PHP is a popular scripting language or text editor that is commonly used when developing a web application. It is widely supported by modern web browsers and has a large community of developers who contribute to its development.
3. **MySQL:** MySQL, an open-source relational database management system (RDBMS), enjoys widespread popularity. Renowned for its ability to store and manage structured data effectively, MySQL is highly regarded for its reliability, scalability, and performance. These attributes render MySQL a suitable choice for a diverse array of applications, spanning from modest-scale endeavors to expansive enterprise-level systems.
4. **Text Editor:** Visual Studio Code is a free and open-source text editor that is used by many developers. It is a popular choice because of its robust features that includes code completion, debugging, and Git integration. Visual Studio Code supports various programming languages, including PHP, which makes it an excellent choice for developing a job recommendation system.

## Software Process Model

Agile methodology is a project management approach that prioritizes flexibility and collaboration. In the context of a job portal, agile methodology could be used to manage the development and maintenance of the portal, with a focus on rapid iteration and constant communication between team members. This approach could be used to ensure that the job portal stays up-to-date with the latest technologies and user needs, and that any issues or bugs are addressed quickly. Agile methodology could also be used to manage the relationship between the job portal's development team and its users, with regular feedback and input from users helping to shape future updates and improvements to the portal. [14] illustrated what Agile looks like in software development, as shown below in Figure 3.11.

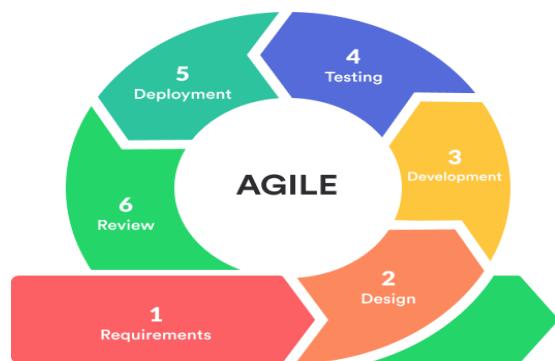


Figure 3.11: Agile Methodology  
(Retrieve from: [www.researchgate.net](http://www.researchgate.net))

## Agile Model Phases

- **Planning:** The researchers plan the necessary information and specifications for the project. In this phase, the researchers worked closely with PESO in Pagadian City to identify and understand the specific requirements for the personalized job recommendation system.



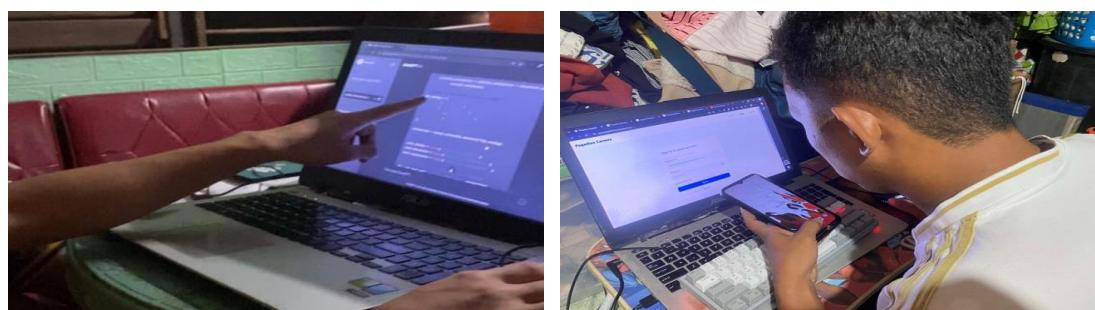
- **Designing:** During this phase, the researchers creates a visual representation of the system, including user interfaces, data structures, and algorithms. Based on the requirements gathered in the previous phase, the researchers begun designing the personalized job recommendation system.



- **Development:** In this phase, the researchers begun coding and building the personalized job recommendation system. They have worked in short iterations to deliver working software, using an Agile development approach to ensure that the system meets the evolving needs of job seekers and employers in Pagadian City.



- **Testing:** As the personalized job recommendation system is developed, the researchers tested it thoroughly to ensure that it meets the requirements and functions as intended. This involves both alpha testing and beta testing.



- **Deployment:** Once the personalized job recommendation system has been thoroughly tested and validated, it has been deployed to production.

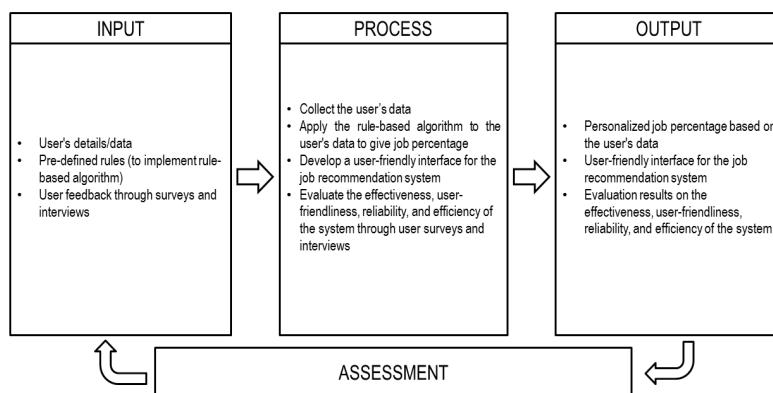


- **Review:** In this stage, once the personalized job recommendation system is set up, the researchers kept an eye on how well it's working and get feedback from people who use it to make sure the system is still useful.



## System Architecture

As shown in the figure below, the input includes the essential factors such as user's educational attainment, skills, and experience. The feedback from the users is also collected through surveys and interviews to enhance the system's performance. Additionally, the process involves collecting user's data, training the algorithm by pre-defined rules, and evaluating the effectiveness and efficiency of the system through user feedback. Thus, the output of the system includes the job recommendations based on the user's data, a user-friendly interface, and insights for job portal developers, job seekers, and employers on how to improve the job search experience.



## **Implementation Plan**

The stage which the researchers identify and gather the necessary information and specifications for the project from the PESO Office. In this phase, the researchers worked closely with PESO in Pagadian City to identify and understand the specific requirements for the personalized job recommendation system. This involves conducting surveys, interviews, or focus groups with job seekers and employers to determine what features and functionality they would like to see in the system. The researchers have prioritized these requirements and document them in a clear and concise manner to guide the development process.



a.) With PESO Manager after survey and interview

## CHAPTER IV

### RESULTS AND DISCUSSION

This chapter presents the results of the study objectives, which include testing and evaluating a Job Recommendation System. It explores the system and discusses its features and performance.

- 1. To develop a user interface for the job recommendation system that is easy to use and accessible to job seekers.**



Figure 4.1: Objective 1

The figure 4.1 above shows that developing a user interface (UI) that is easy to use and accessible to job seekers is a crucial aspect of the objective, as it directly impacts the usability and accessibility of the system for job seekers. The UI serves as the primary point of interaction between users and the recommendation system, making it essential to design an interface that is intuitive, user-friendly, and accessible across different devices and platforms.

- 2. To solve the issue of applicants competing to apply for a specific job by providing them a ranking percentage.**

This objective of providing applicants with a ranking percentage aims to address the challenge of competition among applicants for specific job positions. In many job portals or recruitment platforms, applicants often encounter situations where multiple candidates vie for the same job opportunity, leading to a highly competitive environment. This can be overwhelming for applicants and may result in a sense of uncertainty regarding their chances of success. See figure 4.2 below.

Figure 4.2: Objective 2

**3. To decrease the time-consuming task of job seekers searching for a certain job that fits their preferences.**

Figure 4.3: Objective 3

The reason for implementing this feature, see figure 4.3, is to provide applicants with a percentage match for jobs that fit their preferences, thereby increasing their awareness of how qualified they are for job postings. By offering personalized job recommendations based on individual preferences, skills, and qualifications, applicants can save time and effort typically spent on manually searching for suitable positions.

**4. To make a specified job posting or job board inaccessible once a number of required applicants has already reached.**

Pagadian Careers

Home Company Hiring Now Nicko Balboa Logout

Result : All | Company : Des Appliance | Function : All

**Truck Driver** Driver

Des Appliance Alano Ave, Pagadian City, Zamboanga del Sur

**Regional Sales Manager** Sales

Des Appliance Alano Ave, Pagadian City, Zamboanga del Sur

**Retail Sales Manager** Sales

Des Appliance Alano Ave, Pagadian City, Zamboanga del Sur

**Warehouse Associate** Warehouse

Des Appliance Alano Ave, Pagadian City, Zamboanga del Sur

**Apply Job**

Figure 4.4: Objective 4

The objective of making a specified job posting or job board inaccessible once a number of required applicants has already reached, is very crucial. Figure 4.4, shows how this objective seeks to enhance the user experience by implementing a dynamic system that automatically removes the “apply button” once a number of required applicants has already reached.

## 5. To implement a production rule-based algorithm for the Job Recommendation System.

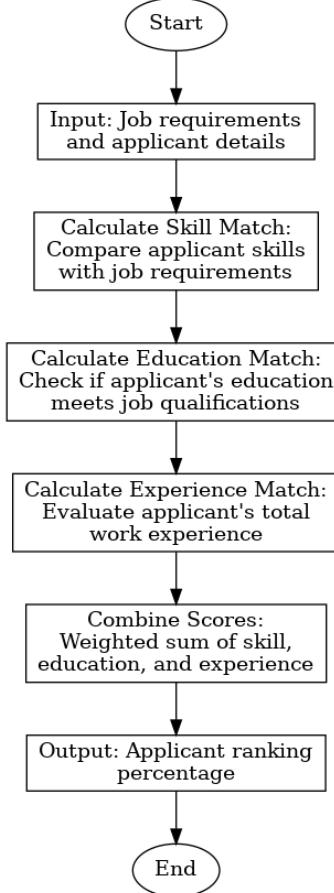


Figure 4.5: Objective 5

The Figure 4.5 above shows how production rule-based algorithm was implemented to enhance the accuracy of job recommendations. This algorithm operates by evaluating a user's profile against predefined rules that represent the job requirements. Each rule consists of conditions that must be met for a job to be deemed suitable for a user. By systematically applying these rules, the system calculates a match percentage, indicating how well a user's qualifications align with the job's criteria. This method ensures that the recommendations are tailored to the user's specific skills, educational attainment, and experience, thereby improving the relevance of the job suggestions.

## End User Evaluation Result

This section discussed about the results of the end user evaluation.

### Respondents Information

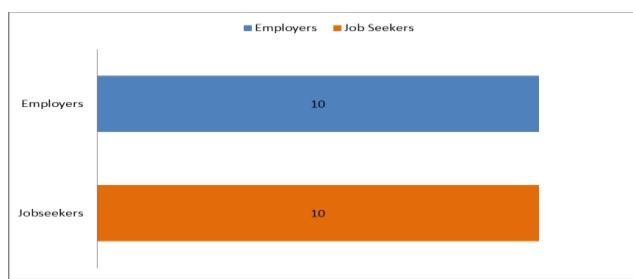


Figure 4.6: Distribution of Respondents

The bar graph in Figure 5.16 above shows that there are 10 jobseekers and 10 employers, a total of 20 respondents for the end-users.

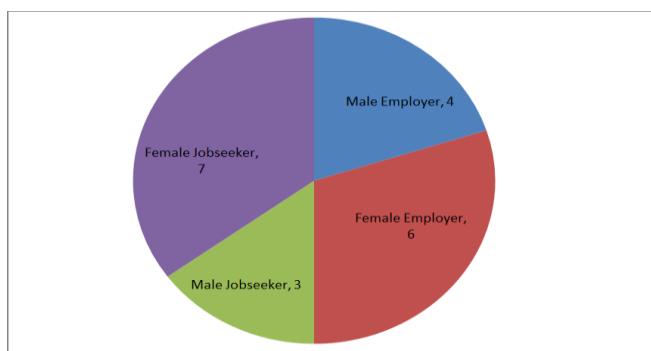


Figure 4.7: Distribution of the Respondents in terms of Gender

The figure 5.17 above shows that there are 6 of female employers than of male employers which is 4. In addition, there are more female applicants (7) than the male which comprises only 3 of the result. The sample depicts the true gender distribution of the population because there are more female jobseekers that look for online jobs than male jobseekers.

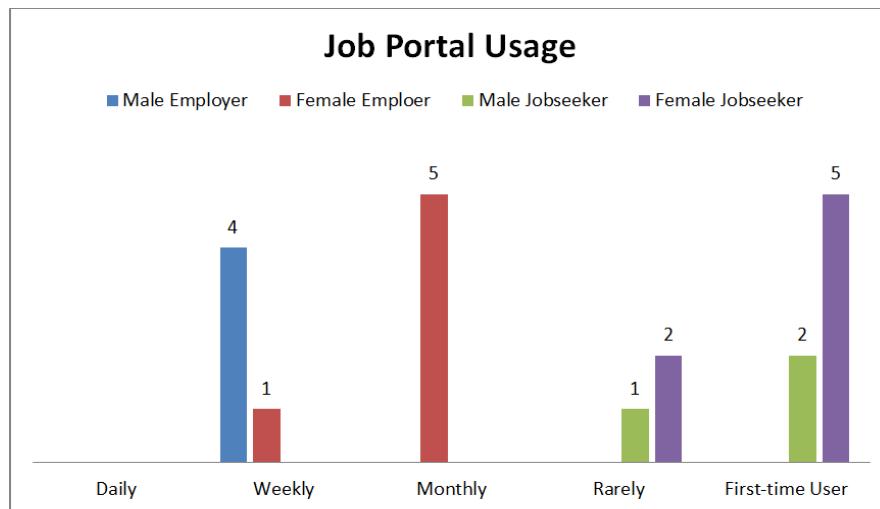


Figure 4.8: Distribution of the Respondents in terms of Job Portal Usage

The Figure 4.8 above shows how often the selected respondents use an online job portal system for a month. As a result, 4 male employers and 1 female employer use the job portal weekly. 5 female employers also use the job portal monthly. In addition, 1 male jobseeker and 2 female jobseekers that uses the job portal rarely. Lastly, there are 2 male jobseekers and 5 female jobseekers are first-time users.

### Design and User Friendliness

	5	4	3	2	1	MEAN	SD
<b>Design and User-Friendliness</b>							
1. The overall design of the system is visually appealing.	12 60%	6 30%	2 10%	0 0%	0 0%	4.5	0.7
2. Navigating through the system is easy and intuitive.	9 45%	8 40%	3 15%	0 0%	0 0%	4.3	1.01
3. The layout and organization of information are clear.	14 70%	5 25%	1 5%	0 0%	0 0%	4.7	0.6
<b>REMARKS</b>						4.5	0.77

Table 4.1: End User Evaluation on Design and User-Friendliness

The design and user-friendliness is an important part in the end-user evaluation because it concerns the rate of the user with the graphics of the system. The results indicate that the system is visually appealing and organized effectively, with the highest satisfaction observed in layout and clarity. However, the slightly lower mean of 4.5 and higher standard deviation of 0.77 for navigation suggest potential room for improvement in making the system more intuitive for all users. See the results in Table 4.1.

## Usability

	5	4	3	2	1	MEAN	SD
<b>Usability</b>							
1. The features of the system are easy to understand and use.	13 65%	7 35%	0 0%	0 0%	0 0%	4.7	0.4
2. The system responds quickly to user commands.	16 80%	4 20%	0 0%	0 0%	0 0%	4.8	0.3
3. Error messages, if any, are helpful and clear.	12 60%	6 30%	2 10%	0 0%	0 0%	4.5	1.3
REMARKS						4.7	0.7

Table 4.2: End User Evaluation on Usability

The usability plays an important part in the end-user evaluation because it concerns the rate of the user with the usability of the system. The overall mean for usability is 4.7, with an average standard deviation of 0.7. These values demonstrate that the system is highly usable, though there is room to improve the clarity and helpfulness of error messages for a more consistent user experience. See the results in Table 4.2.

## Efficiency

	5	4	3	2	1	MEAN	SD
<b>Efficiency</b>							
1. The system helps me efficiently search for jobs.	12 60%	5 25%	3 15%	0 0%	0 0%	4.5	0.8
2. The application process is streamlined and time-efficient.	12 60%	2 10%	6 30%	0 0%	0 0%	4.3	0.9
REMARKS						4.4	0.9

Table 4.3: End User Evaluation on Efficiency

The efficiency plays an important part in the end-user evaluation because it concerns the rate of the user with the efficiency of the system. The overall mean for efficiency is 4.4, with an average standard deviation of 0.9. The results indicates that while most users find the system efficient, there may be specific aspects that could be improved to ensure more consistent performance and satisfaction across all users. See the results in Table 4.3.

## Relevance of Job Recommendation

	5	4	3	2	1	MEAN	SD
<b>Relevance of Job Recommendations</b>							
1. The job recommendations provided are relevant to my preferences and skills.	16 80%	4 20%	0 0%	0 0%	0 0%	4.8	0.6
2. The system understands my job preferences accurately.	14 70%	5 25%	1 5%	0 0%	0 0%	4.6	0.7
REMARKS						4.7	0.7

*Table 4.4: End User Evaluation on Relevance of Job Recommendations*

The relevance of job recommendations plays an important part in the end-user evaluation because it concerns the rate of the user with the relevance of job recommendations of the system. The high overall mean score of 4.7 indicates strong satisfaction with the system's ability to generate accurate and appropriate job matches. The standard deviation of 0.7 suggests consistent feedback, with most users agreeing on the relevance of the recommendations, though there may still be minor variations in individual experiences. See the results in Table 4.4.

### Suggestions or Recommendations

Once the researchers has organized and analyzed the gathered qualitative data, the researchers utilized thematic analysis approach to break down the responses, identify common themes, and propose solutions or insights based on the suggestions or recommendations of the respondents.

RESPONDENT 1		
Text	CODE	CATEGORY
<p>1. Introduce a feature that allows users to set preferences for the frequency of email updates. This way, users can choose to receive daily, weekly, or monthly summaries of relevant job opportunities.</p> <p>2. A personalized dashboard that highlights recommended jobs, upcoming deadlines, and relevant industry news to create a more customized and engaging user experience.</p> <p>3. Provide a feature that recommends professional development courses or certifications based on the user's career goals, helping them stay competitive in the job market.</p>	<p>1. Email Preferences 2. Personalized Dashboard 3. Professional Development Recommendations</p>	Enhancements for User Experience and Engagement

*Table 4.5: Respondent 1 Evaluation on Suggestions and Recommendations*

The Respondent 1, as shown in Table 4.5, suggests several enhancements to improve the user experience and engagement with the job portal system. These enhancements include allowing users to set preferences for email updates, implementing a personalized dashboard, and providing recommendations for professional development courses or certifications.

RESPONDENT 2		
Text	CODE	CATEGORY
<p>1. Consider implementing a feedback mechanism for the job application process. Users could provide feedback on the application experience, helping to identify and address any pain points in the system.</p> <p>2. Incorporate a "one-click apply" feature to streamline the application process and reduce the time it takes to submit applications for multiple positions.</p> <p>3. Integrate a mentorship program within the portal, connecting experienced professionals with those seeking guidance and advice in their career journeys.</p>	<p>1. Feedback Mechanism 2. One-Click Apply Feature 3. Mentorship Program</p>	Suggestions for System Improvement

*Table 4.6: Respondent 2 Evaluation on Suggestions and Recommendations*

As shown in Table 4.6, Respondent 2 suggests several enhancements to the job portal system to improve user experience and functionality. These include implementing a feedback mechanism for the job application process, incorporating a "one-click apply" feature for efficiency, and integrating a mentorship program to provide guidance to users.

RESPONDENT 3		
Text	CODE	CATEGORY
<p>1. Explore partnerships with local businesses or organizations to expand the range of job opportunities available on the portal, ensuring a more comprehensive and diverse job listing.</p> <p>2. Implement a feature that allows users to schedule reminders for follow-up actions, such as checking the status of applications or preparing for upcoming interviews.</p> <p>3. Enhance the visibility of remote and freelance opportunities, making it easier for users to explore flexible work arrangements that align with their preferences.</p>	<p>1. Partnership with Local Businesses</p> <p>2. Reminders and Follow-up Actions</p> <p>3. Visibility of Remote and Freelance Opportunities</p>	<p>Enhancement of system's features and functionalities</p>

*Table 4.7: Respondent 3 Evaluation on Suggestions and Recommendations*

Respondent 3 provided valuable suggestions for enhancing the job portal platform as what is shown in Table 4.7. They recommended exploring partnerships with local businesses or organizations to broaden the range of job opportunities available, implementing a feature for users to schedule reminders for follow-up actions, and improving the visibility of remote and freelance opportunities on the portal.

RESPONDENT 4		
Text	CODE	CATEGORY
<p>1. Provide resources such as resume-building tips, interview guides, and career advice to further support users in their job search journey.</p> <p>2. Integrate a video resume option to allow users to present themselves more dynamically and stand out to potential employers.</p> <p>3. Consider hosting virtual job fairs or networking events within the portal, providing users with direct access to recruiters and potential employers.</p>	<p>1. Resource Support</p> <p>2. Video Resume Integration</p> <p>3. Virtual Job Fairs or Networking Events</p>	<p>Enhancement Suggestions for Job Portal Features</p>

*Table 4.8: Respondent 4 Evaluation on Suggestions and Recommendations*

Shown above in Table 4.8, the respondent has provided three insightful

suggestions to enhance the job portal's functionality and user experience. Respondent 4 suggests including of additional resources for job seekers, integrating a video resume option, and hosting virtual job fairs or networking events within the portal.

RESPONDENT 5		
Text	CODE	CATEGORY
<p>1. Integrate a user-friendly dashboard that summarizes key metrics, such as the number of applications submitted, interview requests received, and profile views, offering users a quick overview of their job search progress.</p> <p>2. Develop a mobile app version of the job portal for on-the-go accessibility, ensuring users can stay connected and updated even when away from their desktops.</p> <p>3. Develop a feature that aggregates industry news and trends, keeping users informed about the latest developments in their respective fields.</p>	<p>1. User-Friendly Dashboard 2. Mobile App Development 3. Industry News Aggregation</p>	Enhancing User Experience and Accessibility

*Table 4.9: Respondent 5 Evaluation on Suggestions and Recommendations*

Respondent 5 suggests three key improvements for the job portal system. First, they recommend integrating a user-friendly dashboard that summarizes essential metrics, offering users a quick overview of their job search progress. Second, they propose developing a mobile app version for on-the-go accessibility. Lastly, they suggest adding a feature that aggregates industry news and trends to keep users informed about the latest developments in their respective fields.

RESPONDENT 6		
Text	CODE	CATEGORY
<p>1. Enhance the search functionality by incorporating advanced filters, allowing users to refine their job searches based on specific criteria such as salary range, company size, or remote work options.</p> <p>2. Include a "career path" feature that provides users with suggested steps to progress in their chosen field, including recommended skills to develop and potential career trajectories.</p> <p>3. Implement a referral program that rewards users for referring friends or colleagues to job opportunities within the portal, fostering community engagement.</p>	<p>1. Advanced Filters 2. Career Path Feature 3. Referral Program</p>	System Enhancement Suggestions

*Table 4.10: Respondent 6 Evaluation on Suggestions and Recommendations*

Respondent 6 in table 4.10 provided valuable suggestions to enhance the functionality and user experience of the job portal system. They proposed incorporating advanced filters for job searches, introducing a "career path" feature to

guide users in their professional development, and implementing a referral program to encourage community engagement.

RESPONDENT 7		
Text	CODE	CATEGORY
<p>1. Consider adding a feature that allows users to connect with and seek advice from industry professionals within the portal, fostering a sense of community and mentorship.</p> <p>2. Create a virtual networking space within the portal where users can join industry-specific groups, participate in discussions, and expand their professional networks.</p> <p>3. Provide an option for users to create and share a personalized portfolio within the portal, showcasing their work samples and projects to potential employers.</p>	<p>1. Mentorship Feature 2. Virtual Networking Space 3. Personalized Portfolio</p>	<p>Enhancing User Interaction and Professional Development</p>

*Table 4.11: Respondent 7 Evaluation on Suggestions and Recommendations*

As shown in Table 4.11, Respondent 7 suggests several enhancements to the online job portal system to improve user experience and facilitate professional development. These include adding features for mentorship and advice from industry professionals, creating virtual networking spaces, and allowing users to showcase their work through personalized portfolios.

RESPONDENT 8		
Text	CODE	CATEGORY
<p>1. Implement a feature that enables users to save and revisit job postings later, making it easier for them to track and manage their preferred opportunities.</p> <p>2. Add a feature that provides insights into the average salary range for specific roles, helping users set realistic expectations and negotiate effectively during job offers.</p> <p>3. Introduce a "career exploration" feature that allows users to explore different career paths and industries based on their skills and interests.</p>	<p>1. Feature for Saving Job Postings 2. Salary Insights Feature 3. Career Exploration Feature</p>	<p>Features Recommendation</p>

*Table 4.12: Respondent 8 Evaluation on Suggestions and Recommendations*

Respondent 8 suggests implementing three specific features to enhance the functionality and user experience of the job portal system. These include enabling users to save and revisit job postings, providing insights into average salary ranges for specific roles, and introducing a career exploration feature based on users' skills and interests.

RESPONDENT 9		
Text	CODE	CATEGORY
<p>1. Explore the possibility of integrating skills assessment tool within the portal, helping users identify and showcase their strengths to potential employers.</p> <p>2. Implement a "skills gap analysis" tool that identifies areas for skill improvement based on the user's desired job and offers relevant resources for upskilling.</p> <p>3. Consider partnering with educational institutions to offer exclusive internship or entry-level opportunities to users, bridging the gap between education and employment.</p>	<p>1. Skills Assessment Integration</p> <p>2. Skills Gap Analysis Tool</p> <p>3. Partnership with Educational Institutions</p>	Innovative Features and Collaborative Opportunities

*Table 4.13: Respondent 9 Evaluation on Suggestions and Recommendations*

The Respondent 9, as shown in Table 4.13, suggests implementing various features and initiatives within the job portal system to enhance user experience and improve opportunities for skill development and employment. These include integrating skills assessment tools, implementing a skills gap analysis tool, and partnering with educational institutions to offer internship opportunities.

RESPONDENT 10		
Text	CODE	CATEGORY
<p>1. Provide a tutorial or onboarding process for new users, guiding them through the system's features and ensuring they make the most out of the job portal.</p> <p>2. Introduce a feature that allows users to request and receive personalized feedback on their resumes and profiles from career experts or peer reviewers.</p> <p>3. Enable users to customize their job alerts based on specific criteria such as company culture, diversity initiatives, or sustainability practices.</p>	<p>1. Tutorial/Onboarding Process</p> <p>2. Personalized Feedback on Resumes</p> <p>3. Customized Job Alerts</p>	Enhancing User Experience and Supportive Features

*Table 4.14: Respondent 10 Evaluation on Suggestions and Recommendations*

Respondent 10's feedback falls under the category of enhancing the user experience by suggesting features that provide additional support and customization options, ultimately improving the overall usability and effectiveness of the job portal system. See Table 4.14.

## **CHAPTER V**

### **CONCLUSION AND RECOMMENDATIONS**

This chapter presents the conclusion of the study and the researchers' recommendations for the future developers.

#### **Conclusion**

In conclusion, the development and implementation of the personalized job recommendation system have effectively addressed key challenges in the job search process, such as the overwhelming volume of job postings, difficulty in identifying relevant opportunities, and competition among applicants. Survey results reveal that the system has been well-received by users, with high ratings for design (overall mean: 4.5), usability (overall mean: 4.7), and relevance of job recommendations (overall mean: 4.7). These findings underscore the system's user-friendliness, responsiveness, and ability to provide relevant job matches.

Furthermore, the inclusion of a ranking percentage feature addresses the challenge of intense competition by helping users prioritize job applications based on their qualifications. The implementation of a production rule-based algorithm has also reduced the time required to find suitable jobs, making the job-seeking experience more efficient and tailored to individual preferences. Overall, the system successfully streamlines the job search process, making it more effective and less overwhelming for users.

#### **Recommendations**

Based on the findings, the researcher endorses the following recommendations for future researchers:

- The developers recommend the future researchers to develop an interactive chat support feature. It could provide instant assistance in navigating the system, answering queries, and even offer personalized tips for improving the visibility of a user's profile to potential employers.
- The developers recommend the future researchers to upgrade or enhance the ranking percentage of the system and the inaccessibility of the job posting.
- The developers recommend the future researchers to add jobs on their favorites and referral program feature of the system.

## **APPENDICES**

# Appendix A

## Gantt Chart

WBS	TASK	LEAD	START	END	DAYS	% DONE	WORK DAYS
<b>1</b>	<b>PHASE I: PLANNING</b>				-	-	-
1.1	Problem Identification		Mon 1/09/23	Wed 1/11/23	3	75%	3
1.2	Title Proposal Creation		Thu 1/12/23	Tue 1/17/23	6	80%	5
1.3	Research Question Formulation		Wed 1/18/23	Tue 1/24/23	7	70%	5
1.4	Research Method, Design, and Strategy Selection		Wed 1/25/23	Tue 1/31/23	7	60%	3
<b>2</b>	<b>PHASE II: REQUIREMENTS AND DATA GATHERING</b>				-	-	-
2.1	Project Proposal Documentation		Thu 2/02/23	Fri 2/24/23	23	90%	17
2.2	Client Consultation		Mon 3/06/23	Tue 3/07/23	2	50%	2
2.3	Initial Interview Conduction		Wed 3/08/23	Fri 3/10/23	3	90%	3
2.4	Initial Interview Data Interpretation		Wed 3/08/23	Fri 3/10/23	3	85%	3
2.5	Follow up/Final Interview Conduction		Mon 8/07/23	Fri 8/25/23	19	90%	15
2.6	Final Interview Data Interpretation		Sat 8/26/23	Sun 8/27/23	2	100%	0
2.7	Requirements Analysis		Mon 8/28/23	Sun 9/03/23	7	90%	5
2.8	System Requirements Analysis		Mon 9/11/23	Fri 9/15/23	5	75%	5
2.9	System Requirements Documentation		Mon 9/18/23	Sun 10/01/23	14	100%	10
<b>3</b>	<b>PHASE III: SYSTEM ANALYSIS AND DESIGNING</b>				-	-	-
3.1	System Modules Creation		Mon 2/06/23	Sun 2/12/23	7	60%	5
3.2	Diagram and Design Implementation		Tue 2/07/23	Mon 2/20/23	14	80%	10
3.3	Data Flow Diagram Creation		Wed 2/08/23	Fri 2/10/23	3	100%	3
3.3.1	Level 0		Thu 2/09/23	Thu 2/09/23	1	100%	1
<b>4</b>	<b>PHASE IV: DEVELOPMENT</b>				-	-	-
4.1	Initial Deployment		Mon 10/30/23	Sun 11/19/23	21	10%	15
4.2	Back-end Implementation		Mon 8/14/23	Mon 1/08/24	148	100%	106
4.3	Front-end Implementation		Mon 12/11/23	Mon 1/08/24	29	95%	21
4.4	Program Coding Documentation		Tue 1/10/23	Fri 1/13/23	4	100%	4
4.5	Final Deployment		Tue 1/09/24	Sun 1/14/24	6	95%	4
<b>5</b>	<b>PHASE V: DEPLOYMENT FOR TESTING</b>				-	-	-
5.1	Alpha Testing		Mon 1/15/24	Sun 1/21/24	7	95%	5
5.2	Beta Testing		Mon 1/22/24	Fri 5/31/24	131	95%	95

Job Recommendation System

Gantt Chart Template © 2006-2018 by Vertex42.com

WBS	Task	Project Lead: France Jel J. J. Jane					
		Lead	Start	End	Days	% Work Done	Days
1	<strong>PHASE I: PLANNING</strong>						
1.1	Problem Identification		Mon 10/2/23	Wed 11/1/23	3	75%	3
1.2	Title Proposal Creation		Thu 1/1/23	Tue 1/7/23	6	60%	5
1.3	Research Question Formulation		Wed 1/1/23	Tue 1/24/23	7	70%	5
1.4	Research Method, Design, and Strategy Selection		Wed 1/25/23	Tue 1/31/23	7	60%	3
2	<strong>PHASE II: REQUIREMENTS AND DATA GATHERING</strong>						
2.1	Project/Proposal Documentation		Thu 2/2/23	Fri 2/24/23	23	90%	17
2.2	Client Consultation		Mon 3/6/23	Tue 3/7/23	2	50%	2
2.3	Initial Interview Conduction		Wed 3/8/23	Fri 3/10/23	3	90%	3
2.4	Initial Interview Data Interpretation		Wed 3/8/23	Fri 3/10/23	3	85%	3
2.5	Follow-up/Final Interview Conduction		Mon 8/7/23	Fri 8/25/23	19	90%	15
2.6	Final Interview Data Interpretation		Sat 8/8/23	Sun 8/27/23	2	100%	0
2.7	Requirements Analysis		Mon 8/28/23	Sun 9/3/23	7	90%	5
2.8	System Requirements Analysis		Mon 9/1/23	Fri 9/15/23	5	75%	5
2.9	System Requirements Documentation		Mon 9/18/23	Sun 10/1/23	14	100%	10
3	<strong>PHASE III: SYSTEM ANALYSIS AND DESIGNING</strong>						
3.1	System Modules Creation		Mon 20/6/23	Sun 2/12/23	7	60%	5
3.2	Diagram and Design Implementation		Tue 20/7/23	Mon 2/20/23	14	80%	10
3.3	Data Flow Diagram Creation		Wed 20/8/23	Fri 2/1/23	3	100%	3
3.3.1	Level 0		Thu 20/9/23	Thu 20/9/23	1	100%	1
3.3.2	Level 1		Fri 2/10/23	Fri 2/10/23	1	100%	1
3.4	Entity Relationship Diagram Creation		Mon 8/14/23	Sun 8/27/23	14	85%	10
3.5	System Design Implementation		Mon 8/21/23	Sun 10/28/23	70	90%	50
3.6	Initial System Design Creation		Mon 8/21/23	Tue 9/19/23	30	90%	22
3.7	Functionality Monitoring		Fri 8/25/23	Mon 8/20/24	270	80%	192
3.8	User Interface Creation		Mon 8/21/23	Mon 2/20/24	180	85%	138
4	<strong>PHASE IV: DEVELOPMENT</strong>						
4.1	Initial Deployment		Mon 10/30/23	Sun 11/16/23	21	10%	15
4.2	Back-end Implementation		Mon 8/14/23	Mon 10/8/24	148	100%	106
4.3	Front-end Implementation		Mon 12/11/23	Mon 1/10/24	20	95%	21
4.4	Program Coding Documentation		Tue 1/10/23	Fri 1/13/23	4	100%	4
4.5	Final Deployment		Tue 10/9/24	Sun 1/14/24	8	95%	4
5	<strong>PHASE V: DEPLOYMENT FOR TESTING</strong>						
5.1	Alpha Testing		Mon 1/15/24	Sun 1/21/24	7	95%	5

## **Appendix B** **Evaluation Tool**

### **Permission Letter**

**FRANCE JELL J. JURANE**  
Brgy. Bulatok, Purok Madasigon,  
Pagadian City  
[juranefrancejell@gmail.com](mailto:juranefrancejell@gmail.com)  
09396068704

**ENGR. VINCE QUIPOT VI**  
PESO Manager  
City Hall Complex, Gatas District,  
7016 Pagadian City

Dear Engr. Vince,

Good Day!

I am France Jell J. Jurane, a Computer Science student of Western Mindanao State University - External Studies Unit Pagadian City. Currently, our group was proposed to implement a WEB-BASED JOB PORTAL here in Pagadian City that is why we are conducting a research on job qualifications and requirements for the Pagadian City Job Market as part of our thesis project. On behalf of my group mates, I am writing to request permission to gather historical data about the qualifications and requirements for various jobs in Pagadian City.

I would like to request your cooperation in allowing me to conduct interviews and surveys with your organization's employees, hiring managers, or human resource personnel to gather certain information on the skills, qualifications, and experience required for various job positions. Rest assured that the data collected will be used for academic purposes only and will be treated with a very strict confidentiality.

I can assure you that any information collected during the course of this study will be kept confidential and will be used only for research purposes. The findings of this research will be used solely for the completion of our thesis, and will not be used for any commercial purposes or released to any third party without your prior consent.

Thank you for your time and consideration. I look forward to your positive response. If you have any questions or concerns, please feel free to contact me via phone or email provided above.

Yours sincerely,



**FRANCE JELL J. JURANE**  
Researcher

Approved by:

**JONREY L. LUMAYAG**  
Thesis Adviser

## Pre-Evaluation Survey Questionnaire

Name (Optional): \_\_\_\_\_

Direction: Please answer the following questions. Mark ✓ for your possible answer.

QUESTIONS	YES	NO	MAYBE
1. Are you familiar with job portal systems and how they operate?			
2. Have you used other job portal systems in the past?			
3. Do you believe PagadianCareers could enhance your job search experience compared to traditional job portal systems?			
4. Are you aware of the different features commonly offered by job portal systems?			
5. Have you encountered challenges with existing job portal systems that you hope the PagadianCareers could address?			
6. Do you think the PagadianCareers provides unique advantages over other job portal systems you've used?			
7. Are you interested in learning more about how the PagadianCareers utilizes algorithms to tailor job suggestions to your profile?			
8. Would you prefer a job portal system that offers personalized career guidance and resources alongside job listings?			
9. Do you think the PagadianCareers could improve your overall job search efficiency?			
10. Are you open to providing feedback and suggestions for improving the PagadianCareers based on your experience?			

## Survey Questionnaire



Republic of the Philippines  
**WESTERN MINDANAO STATE UNIVERSITY**  
Pagadian Campus  
**USER FEEDBACK SURVEY QUESTIONNAIRE**



### An Implementation of a Personalized Job Recommendation System to Enhance User Engagement and Job Search in Pagadian City

#### SECTION 1: RESPONDENT'S INFORMATION

1.1 Full Name (Optional): \_\_\_\_\_

1.2 Gender: \_\_\_\_\_

1.3 College/University: \_\_\_\_\_

1.4 How often do you use the job portal system? Please put a check mark (✓).

- Daily
- Weekly
- Monthly
- Rarely
- First-time user

#### SECTION 2: SURVEY PROPER

**Direction:** After using our job portal system, please put a check mark (✓) and rate the following aspects using the Likert's scale.

##### LEGEND:

- 5 – Strongly Agree
- 4 – Agree
- 3 – Neutral
- 2 – Disagree
- 1 – Strongly Disagree

	5	4	3	2	1
<b>2.1 Design and User-Friendliness</b>					
2.1.1 The overall design of the system is visually appealing.					
2.1.2 Navigating through the system is easy and intuitive.					
2.1.3 The layout and organization of information are clear.					
<b>2.2 Usability</b>					
2.2.1 The features of the system are easy to understand and use.					
2.2.2 The system responds quickly to user commands.					
2.2.3 Error messages, if any, are helpful and clear.					
<b>2.3 Efficiency</b>					
2.3.1 The system helps me efficiently search for jobs.					
2.3.2 The application process is streamlined and time-efficient.					
<b>2.4 Relevance of Job Recommendations</b>					
2.4.1 The job recommendations provided are relevant to my preferences and skills.					
2.4.2 The system understands my job preferences accurately.					



Republic of the Philippines  
**WESTERN MINDANAO STATE UNIVERSITY**  
Pagadian Campus  
**USER FEEDBACK SURVEY QUESTIONNAIRE**



### SECTION 3: SUGGESTIONS AND RECOMMENDATIONS

3.1 Do you have any suggestions or recommendations for improving the job portal system?

Please share your thoughts:

---

---

---

---

---

3.2 Are there specific features you believe should be added to enhance the user experience?  
Please provide details:

---

---

---

---

---

3.3 How can the system better assist you in your job search?  
Any additional comments are welcome:

---

---

---

---

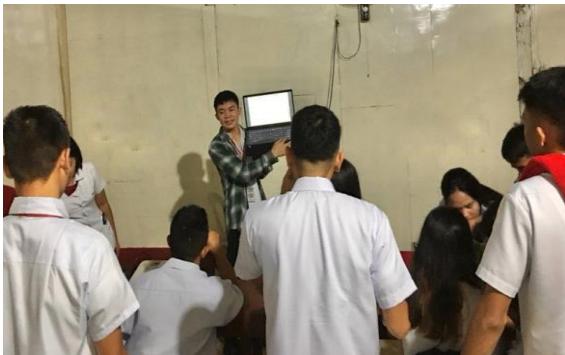
---

**Thank you for taking the time to complete our survey! Your feedback is valuable in enhancing our job portal system.**

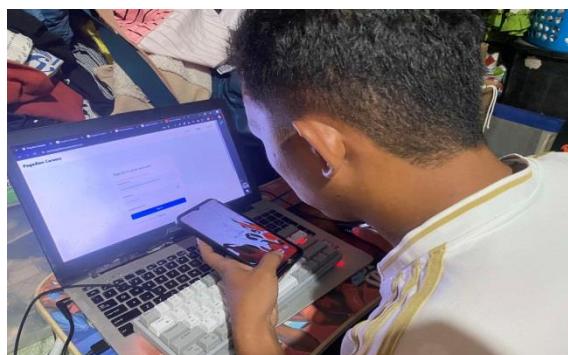
## Appendix C

### Photo Documentation of Testing

#### Alpha Testing



a.) Introducing the system



b.) Introducing and Testing the system



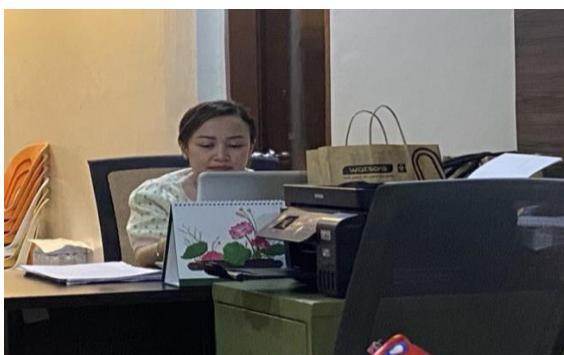
## Beta Testing



d.) Testing the system with the PESO Manager



c.) Testing the system with the Employers



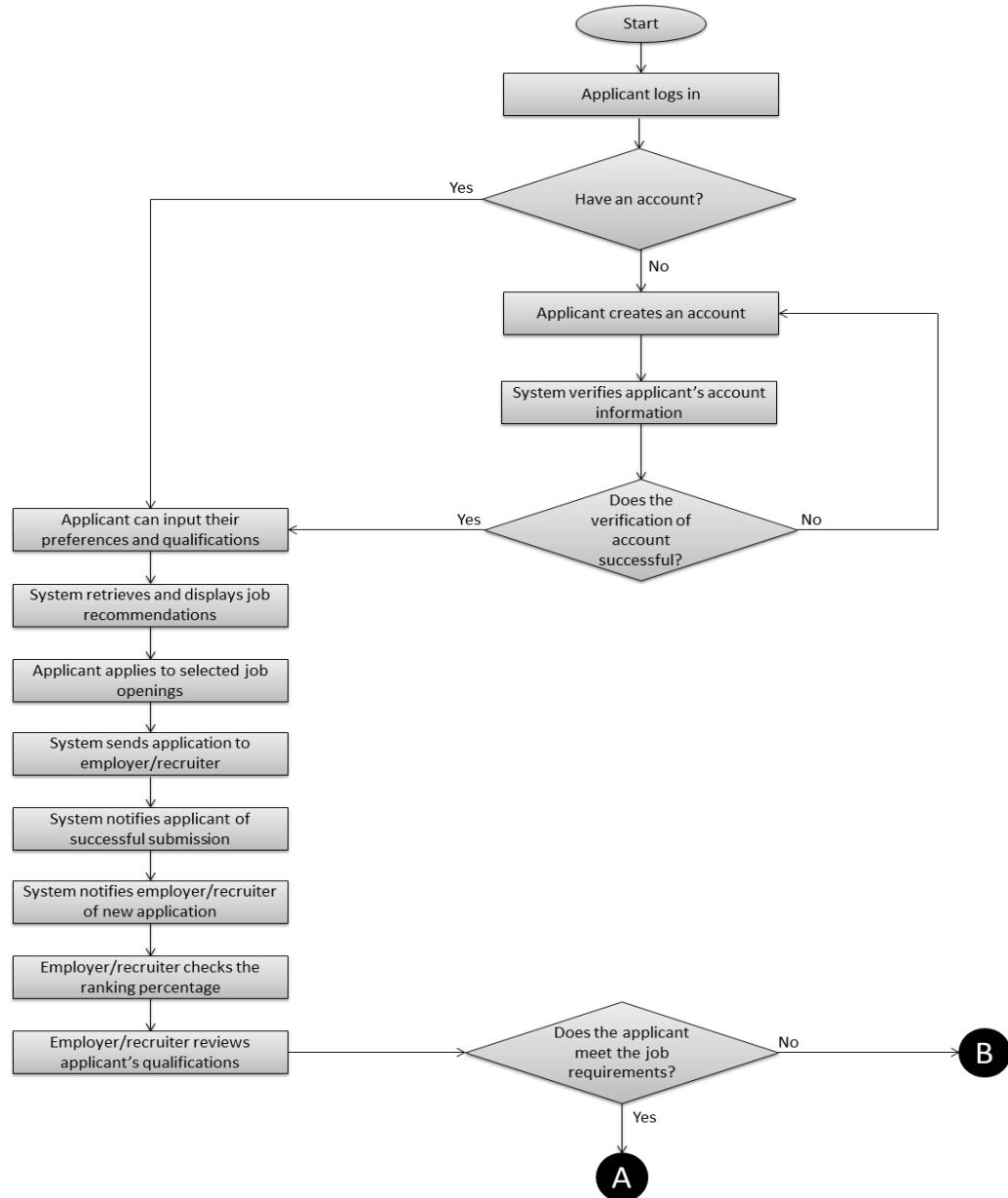


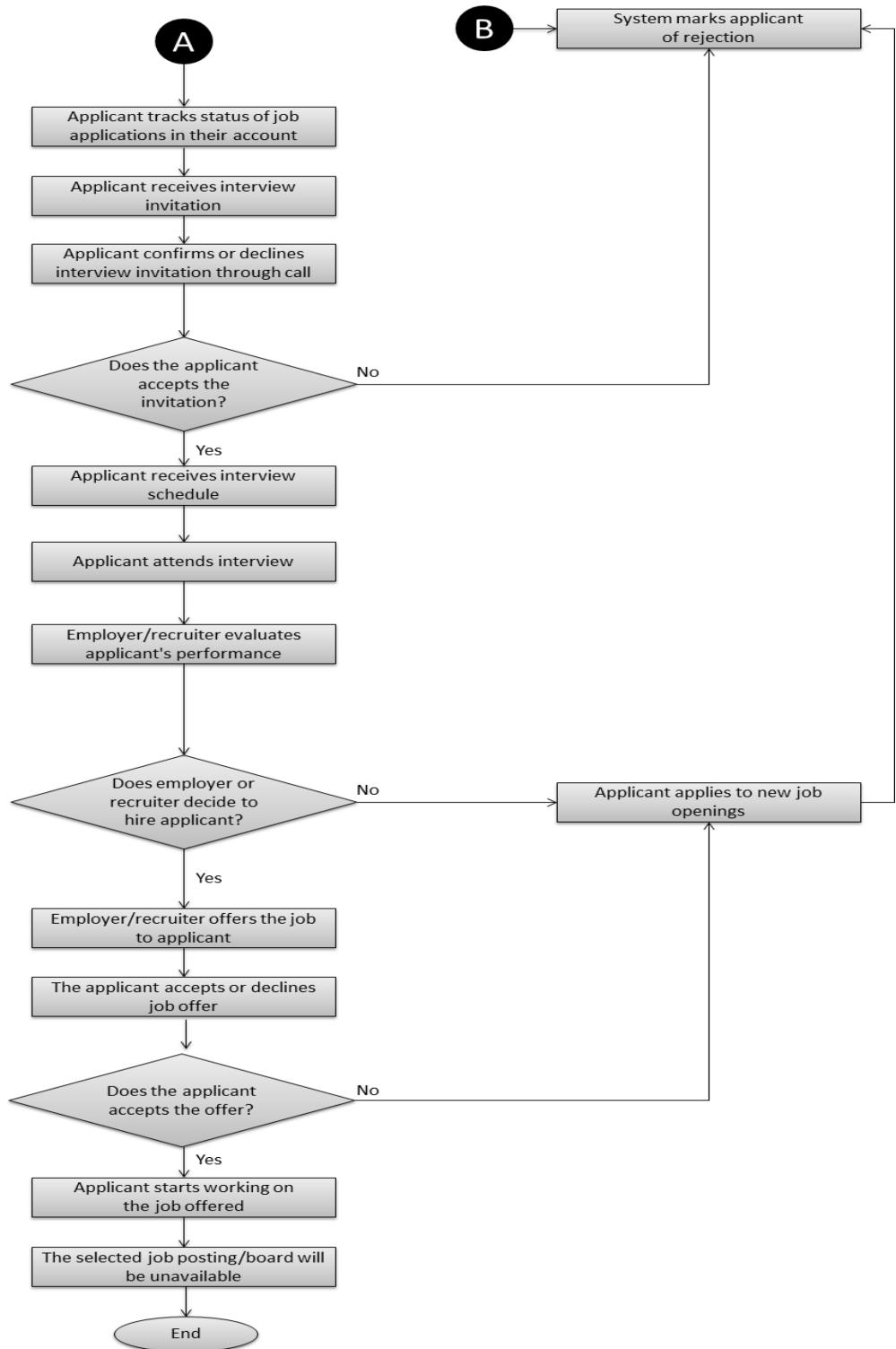
### e.) Testing the system with the Employers



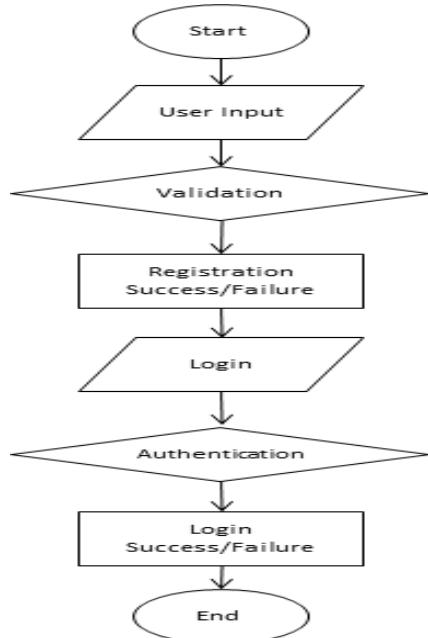
## Appendix D Flowcharts/Diagrams

### System Flowchart

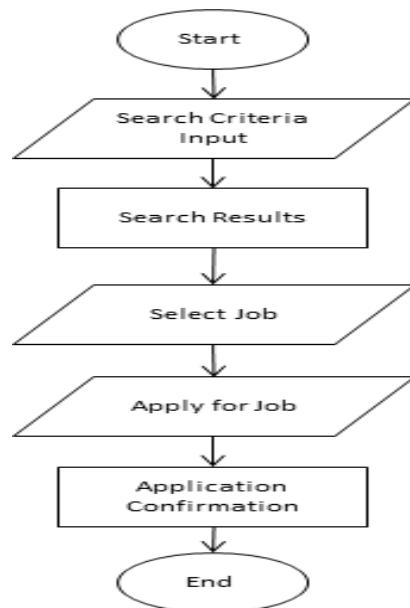




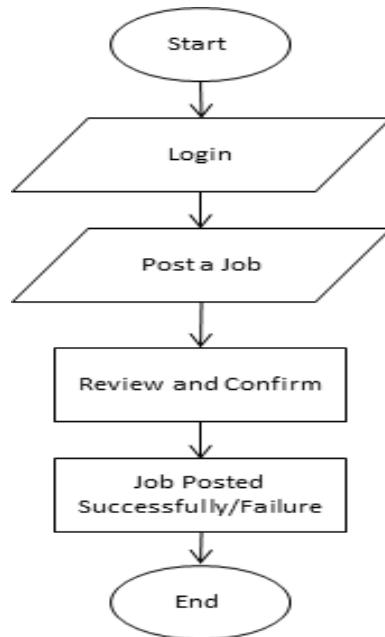
## User Registration and Login Module



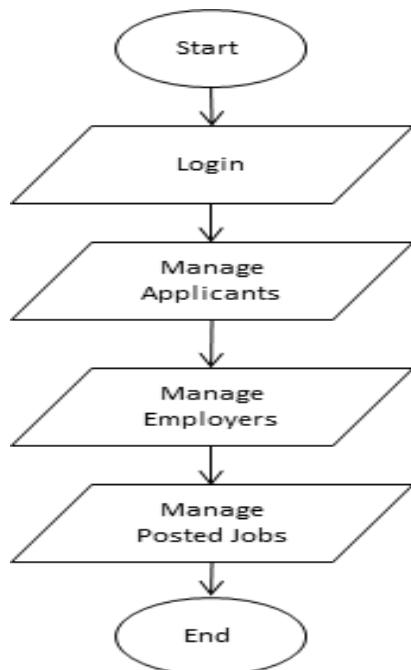
## Job Search and Application Module



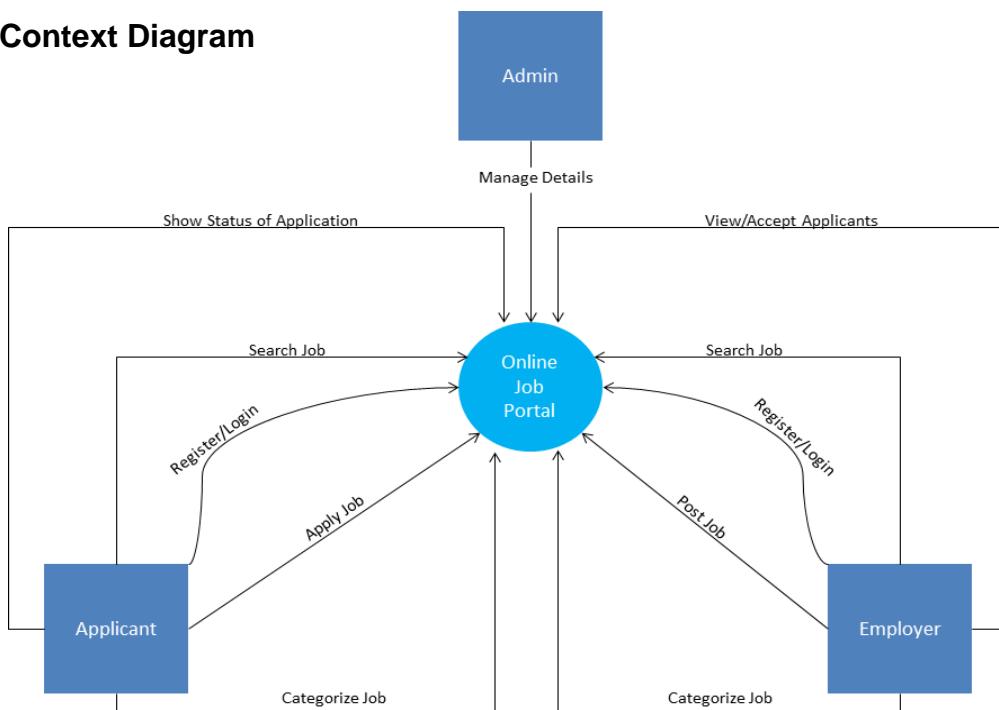
### **Employer Job Posting Module**



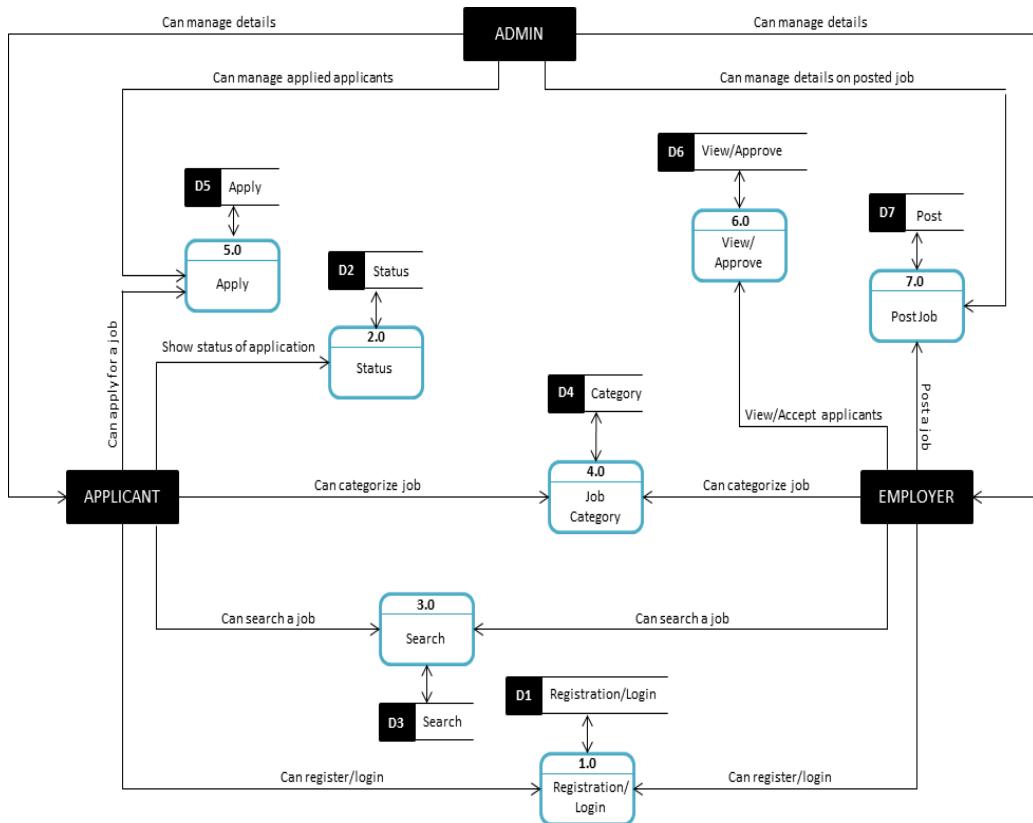
### **Admin Management Module**



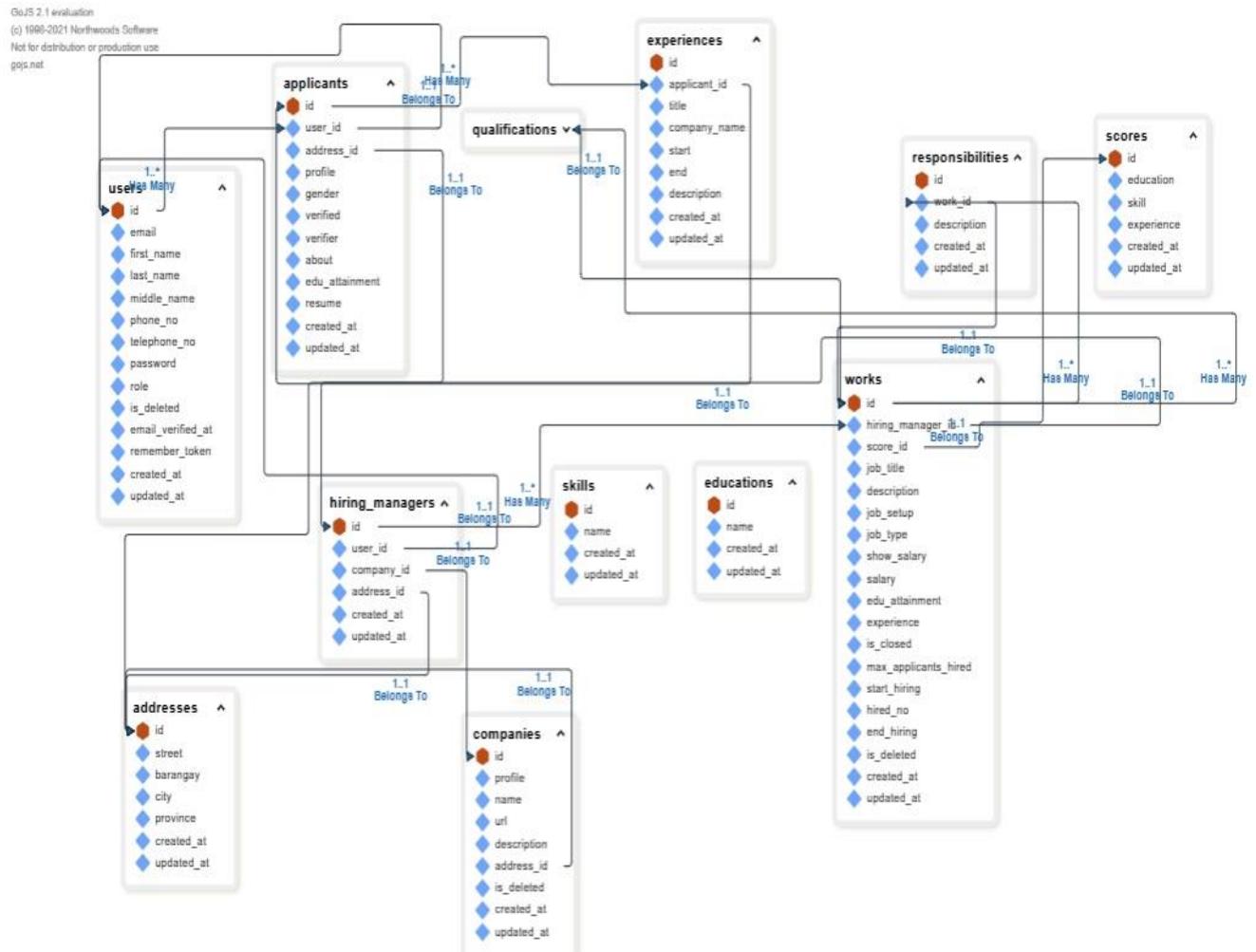
## Context Diagram



## System Data Flow Diagram Level 1



# Entity Relationship Diagram



## Appendix E

### Production Rule-based Algorithm

This appendix presents the PHP implementation of the Job Recommendation, which calculates the suitability of an applicant for a job based on their skills, education, and experience. The algorithm employs a production rule-based approach combined with a weighted scoring system to produce percentage scores for each criterion and an overall recommendation score. This system is an integral part of the job portal's recommendation engine.

```
public function calculateScore(Work $job, Applicant $applicant)
{
    $total_score = 0;

    $scores_rating_from_job = $job->score()->get()->first();
    $job_skill_score = $scores_rating_from_job->skill;
    $job_edu_score = $scores_rating_from_job->education;
    $job_exp_score = $scores_rating_from_job->experience;

    $job_total_score = $job_skill_score + $job_edu_score + $job_exp_score;

    $education_score =
        $this->getEducationScore($job, $applicant);

    $skill_score =
        $this->getSkillScore($job, $applicant);

    $experience_score
        = $this->getExperienceScore($job, $applicant);

    $total_score += $education_score;
    $total_score += $skill_score;
    $total_score += $experience_score;

    $total_score_percent = $job_total_score > 0 ? round(($total_score / $job_total_score) * 100, 2) : 0;
    $education_score_percent = $job_edu_score > 0 ? round(($education_score / $job_edu_score) * 100, 2) : 0;
    $experience_score_percent = $job_exp_score > 0 ? round(($experience_score / $job_exp_score) * 100, 2) : 0;
    $skill_score_percent = $job_skill_score > 0 ? round(($skill_score / $job_skill_score) * 100, 2) : 0;

    return [
        "total" => $total_score_percent,
        'skill' => $skill_score_percent,
        'exp' => $experience_score_percent,
        'edu' => $education_score_percent
    ];
}

protected function getExperienceScore($job, $applicant)
{
    $total_experience = $this->getApplicantTotalExperience($applicant);
    if ($total_experience >= $job->experience) {
        return $job->score()->get()->first()->experience;
    } else {
        return 0;
    }
}
```

## Appendix F

### Relevant Source Code

```
<?php
namespace App\Services;
use App\Models\Aplicant;
use App\Models\Work;

class JobRecommendationService
{
    public function calculateScore(Work $job, Aplicant $aplicant)
    {
        $total_score = 0;

        $scores_rating_from_job = $job->score()->get()->first();
        $job_skill_score = $scores_rating_from_job->skill;
        $job_edu_score = $scores_rating_from_job->education;
        $job_exp_score = $scores_rating_from_job->experience;

        $job_total_score = $job_skill_score + $job_edu_score + $job_exp_score;

        $education_score =
            $this->getEducationScore($job, $aplicant);

        $skill_score =
            $this->getSkillScore($job, $aplicant);

        $experience_score
            = $this->getExperienceScore($job, $aplicant);

        $total_score += $education_score;
        $total_score += $skill_score;
        $total_score += $experience_score;

        $total_score_percent = $job_total_score > 0 ? round(($total_score / $job_total_score) * 100, 2) : 0;
        $education_score_percent = $job_edu_score > 0 ? round(($education_score / $job_edu_score) * 100, 2) : 0;
        $experience_score_percent = $job_exp_score > 0 ? round(($experience_score / $job_exp_score) * 100, 2) : 0;
        $skill_score_percent = $job_skill_score > 0 ? round(($skill_score / $job_skill_score) * 100, 2) : 0;

        return [
            "total" => $total_score_percent,
            'skill' => $skill_score_percent,
            'exp' => $experience_score_percent,
            'edu' => $education_score_percent
        ];
    }

    protected function getExperienceScore($job, $aplicant)
    {
        $total_experience = $this->getAplicantTotalExperience($aplicant);
        if ($total_experience >= $job->experience) {
            return $job->score()->get()->first()->experience;
        } else {
            return 0;
        }
    }

    protected function getEducationScore($job, $aplicant)
    {
        $jobEducations = $job->educations()->get()->pluck('name')->toArray();
        $aplicantEducations = $aplicant->educations()->get()->pluck('name')->toArray();

        $hasMatchingEducation = array_intersect($jobEducations, $aplicantEducations);
        $score = $job->score()->get()->first()->education / 2;
        $total_score = 0;
        if ($hasMatchingEducation) {
            $total_score += $score;
        }

        if ($aplicant->edu_attainment >= $job->edu_attainment) {
            $total_score += $score;
        }
    }

    return $total_score;
}

protected function getSkillScore($job, $aplicant)
{
    $jobSkills = $job->skills()->get()->pluck('name')->toArray();
```

```

$applicantSkills = $applicant->skills()->get()->pluck('name')->toArray();
$matchingSkills = array_intersect($jobSkills, $applicantSkills);
$skillMatchPercentage = count($matchingSkills) / count($jobSkills);

return $skillMatchPercentage * $job->score()->get()->first()->skill;
}

protected function getApplicantTotalExperience($applicant)
{
    $total_experience = 0;
    $experiences = $applicant->experiences()->get();
    foreach ($experiences as $experiences) {
        $total_experience = $experiences->end - $experiences->start;
    }

    return $total_experience;
}

```

The relevant source code provided above implements a production rule-based algorithm to evaluate job applicants based on three primary criteria: experience, education, and skills. The system computes a recommendation score for each applicant by applying a series of if-then rules to assess how well the applicant meets the job requirements.

### 1. Algorithm Overview

The system calculates the total recommendation score by evaluating each criterion independently. The individual scores for experience, education, and skills are computed using predefined rules that reflect the job's requirements. These scores are then aggregated to form a final score, which is represented as a percentage of the applicant's suitability for the job.

### 2. Methodology

The **calculateScore** method serves as the central function in the algorithm. It retrieves the job's scoring criteria and uses specialized methods to compute the scores for each qualification:

- Experience: The applicant's total experience is compared against the job's experience requirement. If the applicant's experience meets or exceeds the requirement, they receive the full experience score.
- Education: The applicant's education is evaluated based on two factors: matching educational fields and the applicant's educational attainment. The system awards a portion of the education score based on these factors.

- Skills: The system calculates the percentage of matching skills between the applicant and the job, awarding a score proportional to the match.

### 3. Rule Application and Scoring

Each of the methods used to calculate scores (e.g., `getExperienceScore`, `getEducationScore`, `getSkillScore`) applies if-then rules to assess the applicant's qualifications:

- If the applicant's qualifications meet the job's requirements, a specific score is awarded.
- If the applicant's qualifications do not meet the job's requirements, the score is adjusted accordingly.
- These rules ensure that the evaluation process is consistent and transparent, with each criterion contributing to the final recommendation score.

### 4. Production Rule-Based Approach

The algorithm exemplifies a production rule-based system through the use of modular, sequential, and condition-based scoring. Each qualification category is evaluated independently, and the resulting scores are aggregated to compute a final recommendation score. This approach ensures that applicants are evaluated according to clear, predefined rules that can easily be modified or extended.

## Appendix G

### Screenshot/Picture of the System



The screenshot shows the login page of Pagadian Careers. The title "Sign in to your account" is at the top. It features two input fields for "Email/Phone" and "Password", both with placeholder text and "Forgot password?" and "Sign in" buttons. Below the form, a link says "Don't have an account yet? Sign up". At the bottom of the page, there is a footer with the company name "Pagadian Careers" and address "Plaza Luz, Pagadian City", along with links for "CONTACTS", "SOCIAL MEDIA", and "LEGAL" sections.

### Register Account

**First Name\***

**Middle Name**

**Last Name\***

**Email\***

**Phone\***  09

**Password**

**Confirm Password\***

**Gender\***  Select Gender

**Create Account**

**Pagadian Careers**  
Plaza Luz, Pagadian City

<b>CONTACTS</b> pagadiancareers@info.com 09123456789	<b>SOCIAL MEDIA</b> Facebook	<b>LEGAL</b> Privacy Policy Terms & Conditions
--	---------------------------------	--

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Madonna O'Hara  
**ADMIN**

---

[Dashboard](#)  
[Company](#)  
[Hiring Manager](#)  
[Applicant](#)  
[Account Settings](#)  
[Logout](#)

[Back](#)

**Nicko Balboa**

---

**CONTACT**  
nickojek2x@gmail.com  
09123456789

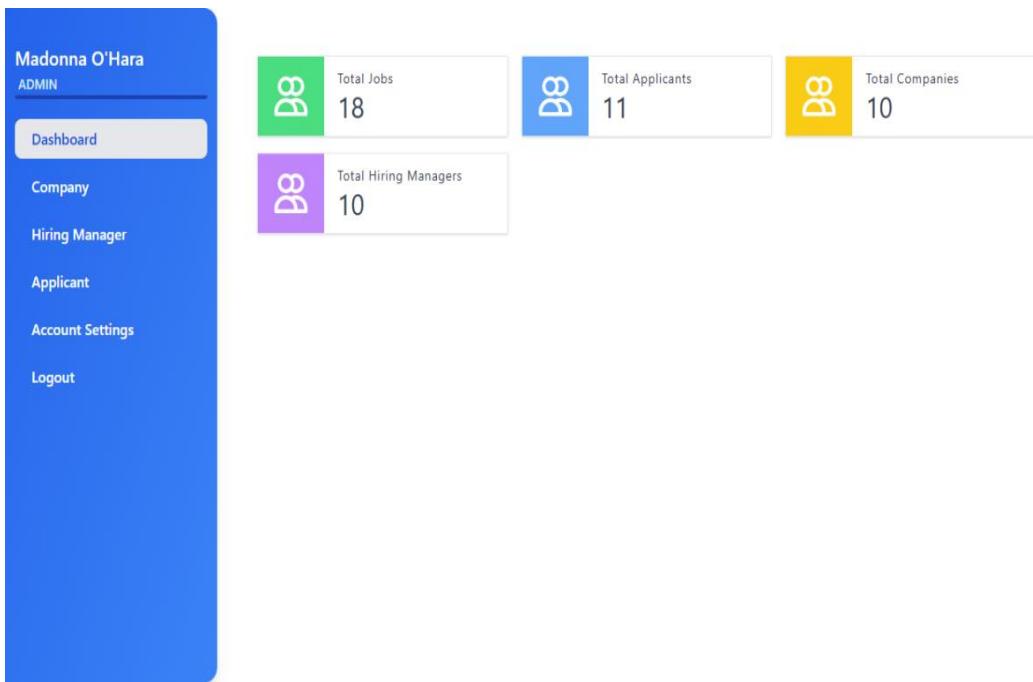
**HIGHEST EDUCATIONAL ATTAINMENT**  
Bachelor's Degree

**SKILLS**  
PHP  
Javascript

**About**

**Education**  
Bachelor of Science in Computer Science WMSU 2020 - 2024

**Experience**  
Programmer Test 2022 - 2023  
ahh



The sidebar shows the user profile "Madonna O'Hara" and "ADMIN". The "Company" menu item is selected.

**Create Company**

Upload Logo \*  
 No file chosen

Name\*  
 ex. Juan

Url  
 ex. Dela

Description

**Address**

House No./Street\*

Province\*  
 Select a Province

City\*  
 Select a Municipality

Barangay\*  
 Select a Barangay

**Create**

Madonna O'Hara  
 ADMIN

Dashboard  
**Company**  
 Hiring Manager  
 Applicant  
 Account Settings  
 Logout

## List of Companies

Search

NAME	URL	ADDRESS
JOLLIBEE-Tiguma Branch	https://www.jollibee.com/	0. tiguma, pagadian city, zamboanga del sur
Des Appliance	https://www.desappliance.com.ph/	alano street, santiago (pob.), pagadian city, zamboanga del sur
EMCOR-Tiguma Branch	https://www.emcor.com/	0. tiguma, pagadian city, zamboanga del sur
Pagadian Chamber of Commerce and Industry Foundation, Inc.	https://www.pccif.com.ph/	3rd floor, santiago (pob.), pagadian city, zamboanga del sur
Fortune Life Insurance Company, Inc.	https://web.fortunelife.com/	3/f cagampang bldg., no.59 bonifacio st., cor. rizal ave., santiago (pob.), pagadian city, zamboanga del sur
Metrobank-Pagadian City	http://www.metrobank.com/	f. s. pajares avenue, san francisco (pob.), pagadian city, zamboanga del sur
Rakuboss Online Marketplace	https://www.rakuboss.ph/	08. buenavista, pagadian city, zamboanga del sur
Extrematics Software Development	https://extrematics.com/	alano avenue, santo niño, pagadian city, zamboanga del sur
Public Employment Service Office	http://pesopagadian.net/	city hall complex, gatas (pob.), pagadian city, zamboanga del sur
MANTECH Computer Services	https://www.mantech.com/	09. santa lucia (pob.), pagadian city, zamboanga del sur

Create Company

[Pagadian Careers](#)
Home Jobs My Jobs Profile Logout

[Back](#)

**MANTECH Computer Services**  
**IT Support Specialist**  
(09, SANTA LUCIA (POB.), PAGADIAN CITY, ZAMBOANGA DEL SUR)

provide technical support for a company's technology systems, including hardware, software, networks, and more.

**Contacts**  
michael.rivera@mantech.ph  
+63 917 333 1212  
+63 (02) 078-5678

**Responsibilities**  
Technical support  
Product evaluation

**Qualifications**  
Associate degree in IT or related field.  
1+ years of experience in IT support.  
Excellent troubleshooting and communication skills

**Skills**  
Hardware Proficiency.  
Software Knowledge.

**Educations**  
Bachelor of Science in Information Technology  
Bachelor of Science in Computer Science

**Hiring Information**  
Applicants: Starts: 3 November 15, 2024 Ends: December 14, 2024

Score: 70% Required Experience: 1 Year Salary: ₱55,000 Job Type: Full-Time Job Setup: On-Site Apply

Skills: 0%

Educations: 100%

Experience: 100%

**Pagadian Careers**  
Plaza Luz, Pagadian City

**CONTACTS**  
pagadiancareers@info.com  
09123456789

**SOCIAL MEDIA**  
Facebook

**LEGAL**  
Privacy Policy  
Terms & Conditions

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## Appendix H

### Test Cases and Results

#### Alpha Testing

<b>Project Name</b>	Job Recommendation System
<b>Module Name</b>	User Registration and Login
<b>Created By</b>	Angelito Piedad
<b>Creation Date</b>	10/1/2024
<b>Reviewed By</b>	France Jell Jurane
<b>Review Date</b>	11/7/2024

Test Scenario ID	Test Scenario Description	Test Case Description	Test Steps	Post Condition	Executed By	Execution Date
TS_USER_001	Verify the login functionality of admin login page	Enter a valid email & valid password	1. Enter valid email 2. Enter valid password 3. Click on Login Button	Success	Tester Angelito	10/1/2024
TS_USER_002	Verify the login functionality of employer login page	Enter a valid email & invalid password	1. Enter valid email 2. Enter invalid password 3. Click on Login Button	Error	Tester Angelito	10/2/2024
TS_USER_002	Verify the login functionality of applicant login page	Enter a invalid email & valid password	1. Enter invalid email 2. Enter valid password 3. Click on Login Button	Error	Tester Angelito	10/2/2024

<b>Project Name</b>	Job Recommendation System
<b>Module Name</b>	Job Search and Application
<b>Created By</b>	Angelito Piedad
<b>Creation Date</b>	10/9/2024
<b>Reviewed By</b>	France Jell Jurane
<b>Review Date</b>	11/7/2024

Test Scenario ID	Test Scenario Description	Test Case Description	Test Steps	Post Condition	Executed By	Execution Date
TS_JOBSEARC_H_001	Verify job search functionality	Search for a job with valid criteria	1. Enter valid search criteria 2. Click on the "Search" button 3. Verify the search results are displayed	Error	Tester Angelito	10/9/2024
TS_JOBSEARC_H_002	Verify no results message for invalid search	Search for a job with invalid criteria	1. Enter invalid search criteria 2. Click on the "Search" button 3. Verify the "No results found" message is displayed	Success	Tester Angelito	10/9/2024
TS_JOBSEARC_H_003	Verify job selection functionality	Select a job from the search results	1. Perform a valid job search 2. Click on a job from the search results 3. Verify the job details are displayed 2. Verify all details 3. Click "Confirm"	Error	Tester Angelito	10/10/2024
TS_JOBSEARC_H_004	Verify job application functionality	Apply for a selected job	1. Select a job from the search results 2. Click on "Apply" button 3. Fill in required application details 4. Submit application	Error	Tester Angelito	10/10/2024
TS_JOBSEARC_H_005	Verify application confirmation functionality	Confirm job application submission	1. Submit a job application 2. Verify the application confirmation message is displayed	Error	Tester Angelito	10/10/2024

<b>Project Name</b>	Job Recommendation System
<b>Module Name</b>	Employer Job Posting
<b>Created By</b>	Angelito Piedad
<b>Creation Date</b>	10/14/2024
<b>Reviewed By</b>	France Jell Jurane
<b>Review Date</b>	11/11/2024

Test Scenario ID	Test Scenario Description	Test Case Description	Test Steps	Post Condition	Executed By	Execution Date
TS_JOB_001	Verify employer login functionality	Login with valid credentials	1. Enter valid email 2. Enter valid password 3. Click on Login Button	Success	Tester Angelito	10/14/2024
TS_JOB_002	Verify job posting functionality	Post a job with valid details	1. Login with valid credentials 2. Navigate to "Post a Job" 3. Fill in all required job details 4. Click "Submit"	Error	Tester Angelito	10/14/2024
TS_JOB_003	Verify review and confirmation functionality	Verify review and confirmation functionality	1. Navigate to the review page after entering job details 2. Verify all details 3. Click "Confirm"	Error	Tester Angelito	10/14/2024
TS_JOB_004	Verify successful job posting message	Verify message for successful posting	1. Post a job 2. Confirm submission 3. Verify the success message displayed	Success	Tester Angelito	10/15/2024
TS_JOB_005	Verify failure message when posting job fails	Simulate a job posting failure	1. Attempt to post a job with missing/invalid details 2. Verify error message displayed	Error	Tester Angelito	10/15/2024

# Beta Testing

Project Name	Job Recommendation System
Module Name	User Registration and Login
Created By	Angelito Piedad
Creation Date	10/7/2024
Reviewed By	France Jell Jurane
Review Date	11/7/2024

Test Scenario ID	Test Scenario Description	Test Case Description	Test Steps	Post Condition	Executed By	Execution Date
TS_USER_001	Verify the login functionality of admin login page	Enter a valid email & valid password	1. Enter valid email 2. Enter valid password 3. Click on Login Button	Success	Tester Angelito	10/7/2024
TS_USER_002	Verify the login functionality of employer login page	Enter a valid email & invalid password	1. Enter valid email 2. Enter invalid password 3. Click on Login Button	Success	Tester Angelito	10/7/2024
TS_USER_002	Verify the login functionality of applicant login page	Enter a invalid email & valid password	1. Enter invalid email 2. Enter valid password 3. Click on Login Button	Success	Tester Angelito	10/7/2024

Project Name	Job Recommendation System
Module Name	Job Search and Application
Created By	Angelito Piedad
Creation Date	10/11/2024
Reviewed By	France Jell Jurane
Review Date	11/7/2024

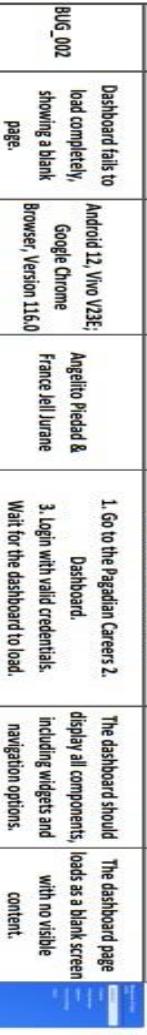
Test Scenario ID	Test Scenario Description	Test Case Description	Test Steps	Post Condition	Executed By	Execution Date
TS_JOBSEARC_H_001	Verify job search functionality	Search for a job with valid criteria	Enter valid search criteria 2. Click on the "Search" button 3. Verify the search results are displayed	Success	Tester Angelito	10/11/2024
TS_JOBSEARC_H_002	Verify no results message for invalid search	Search for a job with invalid criteria	1. Enter invalid search criteria 2. Click on the "Search" button 3. Verify the "No results found" message is displayed	Success	Tester Angelito	10/11/2024
TS_JOBSEARC_H_003	Verify job selection functionality	Select a job from the search results	1. Perform a valid job search 2. Click on a job from the search results 3. Verify the job details are displayed 2. Verify all details 3. Click "Confirm"	Success	Tester Angelito	10/11/2024
TS_JOBSEARC_H_004	Verify job application functionality	Apply for a selected job	1. Select a job from the search results 2. Click on "Apply" button 3. Fill in required application details 4. Submit application	Success	Tester Angelito	10/11/2024
TS_JOBSEARC_H_005	Verify application confirmation functionality	Confirm job application submission	1. Submit a job application 2. Verify the application confirmation message is displayed	Success	Tester Angelito	10/12/2024

Project Name	Job Recommendation System
Module Name	Employer Job Posting
Created By	Angelito Piedad
Creation Date	10/17/2024
Reviewed By	France Jell Jurane
Review Date	11/15/2024

Test Scenario ID	Test Scenario Description	Test Case Description	Test Steps	Post Condition	Executed By	Execution Date
TS_JOB_001	Verify employer login functionality	Login with valid credentials	1. Enter valid email 2. Enter valid password 3. Click on Login Button	Success	Tester Angelito	10/17/2024
TS_JOB_002	Verify job posting functionality	Post a job with valid details	1. Login with valid credentials 2. Navigate to "Post a Job" 3. Fill in all required job details 4. Click "Submit"	Success	Tester Angelito	10/17/2024
TS_JOB_003	Verify review and confirmation functionality	Verify review and confirmation functionality	1. Navigate to the review page after entering job details 2. Verify all details 3. Click "Confirm"	Success	Tester Angelito	10/17/2024
TS_JOB_004	Verify successful job posting message	Verify message for successful posting	1. Post a job 2. Confirm submission 3. Verify the success message displayed	Success	Tester Angelito	10/17/2024
TS_JOB_005	Verify failure message when posting job fails	Simulate a job posting failure	1. Attempt to post a job with missing/invalid details 2. Verify error message displayed	Success	Tester Angelito	10/1/2024

# Appendix I

## Bug Report

BUG ID	BUG DESCRIPTION	DEVICE DESCRIPTION	REPORTED BY	STEPS TO EXECUTING	EXPECTED RESULT	ACTUAL RESULT	SCREENSHOT	SEVERITY	STATUS	ASSIGNED TO	COMMENT
BUG_001	Login page allows submission with an incorrect password without an error message.	Android 12, Vivo V23E	Angeloito Piedad	1. Go to the login page Pagadian Careers Login. 2. Enter a valid email (e.g., test@example.com), 3. Enter an incorrect password. 4. Click the "login" button.	An error message indicating an incorrect password should display.	No error message appears, and the page does not respond.		MEDIUM	OPEN	SYSTEM DEVELOPER	Issue prevents users from understanding login errors.
BUG_002	Dashboard fails to load completely, showing a blank page.	Android 12, Vivo V23E, Google Chrome Browser, Version 116.0	Angeloito Piedad & France Jell Jurane	1. Go to the Pagadian Careers 2. Dashboard. 3. Login with valid credentials. Wait for the dashboard to load.	The dashboard should display all components, including widgets and navigation options, including widgets and navigation options.	The dashboard page loads as a blank screen with no visible content.		HIGH	OPEN	SYSTEM DEVELOPER	Issue affects usability, as users are unable to access dashboard functionalities.
BUG_003	Dashboard elements misaligned on hiring manager page.	Windows 10, Chrome Browser Version 116.0	Niclo Balboa	1. Go to the Hiring Manager Dashboard. 2. Login with hiring manager credentials. 3. View layout and alignment of elements.	All elements should be properly aligned and accessible.	Widgets and buttons are overlapping or misaligned, impacting usability.		MEDIUM	OPEN	SYSTEM DEVELOPER	Issue impacts user experience but is not critical to functionality.
BUG_004	Dashboard page occasionally fails to load, showing a loading icon indefinitely.	Android 12, Samsung Galaxy S21, Chrome Browser Version 114.0	Angeloito Piedad, France Jell Jurane, & Niclo Balboa	1. Go to the Main Dashboard. 2. Login with user credentials. 3. Observe if dashboard loads indefinitely.	Dashboard should load within a few seconds, displaying all data.	Page shows an indefinite loading icon without completing.		HIGH	OPEN	SYSTEM DEVELOPER	Potential server-side issue; investigate for possible load handling or timeout errors.

# Appendix J

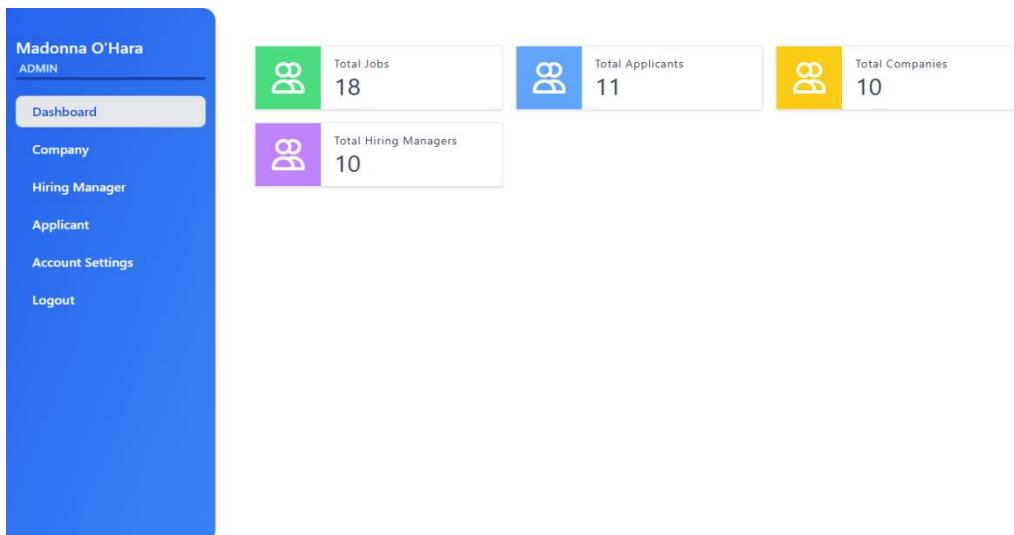
## User Manual

### Admin Login Form

The screenshot shows the login page of the Pagadian Careers website. At the top, there is a navigation bar with links for Home, Login, and Register. Below the navigation bar is a sign-in form titled "Sign in to your account". The form contains fields for Email/Phone and Password, both with placeholder text. There is also a "Forgot password?" link and a blue "Sign in" button. Below the sign-in form, there is a link to "Sign up" if the user does not have an account. At the bottom of the page, there is a footer section with the website's name, address, and various links for CONTACTS, SOCIAL MEDIA, and LEGAL information.

This is the form where the administrator can login with their correct username and password. If the administrator enters an invalid username and password, the system do not accept the admin's login credentials. If it is valid, the administrator can be redirected to the main form.

### Admin Dashboard



Illustrated above is the main form of the system. Once the administrator has successfully login, this is the form that can be shown. Only the verified users can have an access to this system menu.

## Employer Login Form

The screenshot shows the login page of the Pagadian Careers website. At the top, there is a navigation bar with links for Home, Login, and Register. Below the navigation bar is a central login form titled "Sign in to your account". The form contains fields for "Email/Phone" and "Password", both with placeholder text. There is also a "Forgot password?" link and a blue "Sign in" button. Below the form, a small note says "Don't have an account yet? [Sign up](#)". At the bottom of the page, there is a footer section with the company name "Pagadian Careers" and address "Plaza Luz, Pagadian City". It also includes links for CONTACTS (with email pagadiancareers@info.com and phone 09123456789), SOCIAL MEDIA (Facebook), and LEGAL (Privacy Policy and Terms & Conditions). A copyright notice at the very bottom states "© 2024 Pagadian Careers. All Rights Reserved."

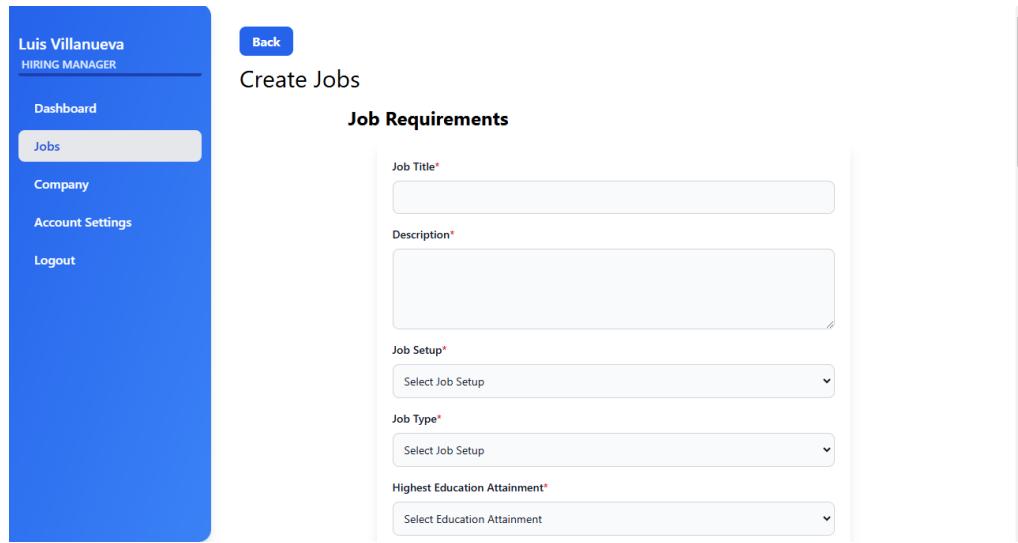
This is the form where the employer can login with their correct username and password. If the employer enters an invalid username and password, the system do not accept the employer's login credentials. If it is valid, the employer can be redirected to the main form.

## Employer's Homepage

The screenshot shows the employer's homepage for Luis Villanueva, Hiring Manager. On the left, there is a sidebar with a profile picture and the name "Luis Villanueva HIRING MANAGER". Below the name are links for Dashboard, Jobs, Company, Account Settings, and Logout. To the right of the sidebar is a grid of six cards providing a summary of current hiring metrics. The cards are arranged in two rows of three. The first row contains: "Jobs 2" (pink icon), "Applicants 0" (purple icon), and "Pending 0" (green icon). The second row contains: "Interview 0" (blue icon), "Hired 0" (yellow icon), and "Rejected 0" (red icon).

Shown above is the employer's homepage. It is the central hub for employers using the system. It provides access to essential features, allowing employers to navigate the system efficiently.

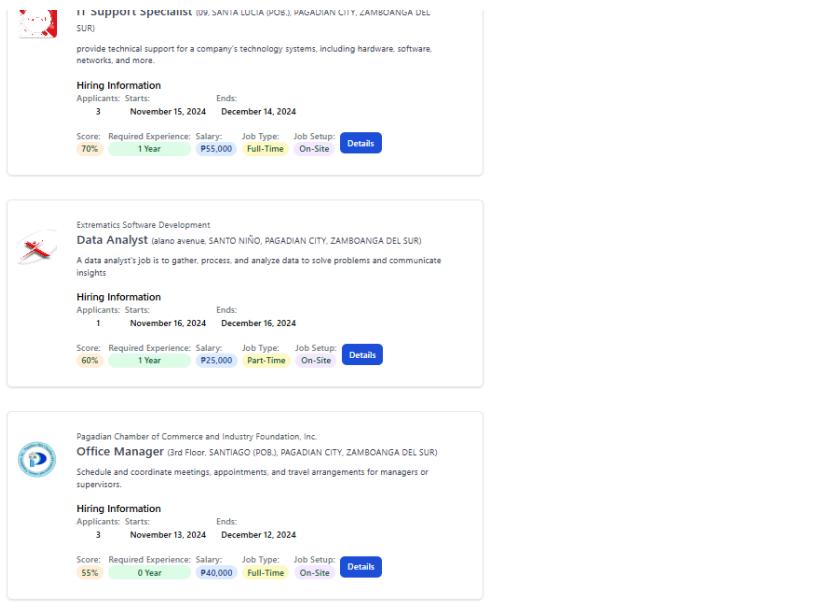
## Job Posting



The screenshot shows a job posting interface. On the left is a sidebar with a blue header containing the user's name, Luis Villanueva, and title, HIRING MANAGER. Below the header are navigation links: Dashboard, Jobs (which is selected and highlighted in grey), Company, Account Settings, and Logout. The main content area has a "Create Jobs" heading and a "Job Requirements" section. This section includes fields for "Job Title" (with a placeholder box), "Description" (with a larger text area), "Job Setup\*" (a dropdown menu), "Job Type\*" (another dropdown menu), and "Highest Education Attainment\*" (a third dropdown menu). A "Back" button is located at the top left of the main content area.

Provided above is the job posting page that enables employers to create and publish new job listings. Employers can post jobs and provide details and requirements to attract potential candidates.

## List of Jobs Created



The screenshot displays three job listing cards. Each card includes a small company logo, the job title, location, a brief description, hiring information (start and end dates, applicant count, score, experience required, salary, job type, setup, and on-site availability), and a "Details" button.

- IT SUPPORT SPECIALIST** (Brg. SANTA LUCIA (P.O.B.), PAGADIAN CITY, ZAMBOANGA DEL SUR)  
Provide technical support for a company's technology systems, including hardware, software, networks, and more.  
**Hiring Information**  
Applicants: Starts: 3 November 15, 2024 Ends: December 14, 2024  
Score: 70% Required Experience: 1 Year Salary: ₱55,000 Job Type: Full-Time Job Setup: On-Site Details
- Data Analyst** (Alano Avenue, SANTO NIÑO, PAGADIAN CITY, ZAMBOANGA DEL SUR)  
A data analyst's job is to gather, process, and analyze data to solve problems and communicate insights.  
**Hiring Information**  
Applicants: Starts: 1 November 16, 2024 Ends: December 16, 2024  
Score: 60% Required Experience: 1 Year Salary: ₱25,000 Job Type: Part-Time Job Setup: On-Site Details
- Office Manager** (3rd Floor, SANTIAGO (P.O.B.), PAGADIAN CITY, ZAMBOANGA DEL SUR)  
Schedule and coordinate meetings, appointments, and travel arrangements for managers or supervisors.  
**Hiring Information**  
Applicants: Starts: 3 November 13, 2024 Ends: December 12, 2024  
Score: 55% Required Experience: 0 Year Salary: ₱40,000 Job Type: Full-Time Job Setup: On-Site Details

Shown above is the page where employers can view and manage the job listings they have posted. It serves as a centralized space for overseeing and editing job details.

## List of Applicants

The screenshot shows a user interface for managing applicants. On the left, a sidebar for 'Luis Villanueva, HIRING MANAGER' includes links for Dashboard, Jobs (which is selected), Company, Account Settings, and Logout. The main area is titled 'Applicants (Warehouse Associate)' and features a search bar and filters for Gender and Status. A table lists two applicants:

APPLICANT NAME	ADDRESS	CONTACTS	GENDER	STATUS	REMARKS	SCORE	RANK	ACTION
Balboa, Nicko	No Address	email: nickojek2x@gmail.com phone: 09123456789	MALE	PENDING	[Redacted]	55%	1	<button>Save</button>
Jurane, France	No Address	email: juranefrancejell@gmail.com phone: 09396068704	MALE	PENDING	[Redacted]	0%	2	<button>Save</button>

Illustrated above is the page where it presents employers with a list of applicants who have expressed interest in their posted jobs. Employers can review applicant details and provide status.

## Jobseeker Login Form

The screenshot shows a login form for 'Pagadian Careers'. At the top, there are links for Home, Login, and Register. The main form is titled 'Sign in to your account' and contains fields for Email/Phone and Password, along with a 'Forgot password?' link and a 'Sign in' button. Below the form, a link says 'Don't have an account yet? [Sign up](#)'. At the bottom, the Pagadian Careers logo is shown with the address 'Plaza Luz, Pagadian City'. The footer includes links for CONTACTS (email: pagadiancareers@info.com, phone: 09123456789), SOCIAL MEDIA (Facebook), and LEGAL (Privacy Policy, Terms & Conditions). A copyright notice at the very bottom states '© 2024 Pagadian Careers. All Rights Reserved.'

This is the form where the jobseeker can login with their correct username and password. If the jobseeker enters an invalid username and password, the system do not accept the employer's login credentials. If it is valid, the jobseeker can be redirected to the main form.

## Jobseeker Homepage



Provided above is the main interface for individuals that are actively looking for available jobs. It provides a user-friendly interface with features tailored to enhance the job search experience.

## Jobseeker's Applied Jobs

This image shows the 'My Jobs' section of the Pagadian Careers website. At the top, there are four colored boxes representing job statuses: green for Pending (0), blue for Interview (0), red for Rejected (0), and yellow for Hired (0). Below these are search and filter options for 'Search', 'Company', and 'Status'. A table below lists columns for 'JOB TITLE', 'COMPANY NAME', 'ADDRESS', 'STATUS', and 'REMARKS'. The footer of the page includes the company logo, address, and links for 'CONTACTS', 'SOCIAL MEDIA', and 'LEGAL' information.

### Pagadian Careers

Plaza Luz, Pagadian City

#### CONTACTS

pagadiancareers@info.com

09123456789

#### SOCIAL MEDIA

Facebook

#### LEGAL

Privacy Policy

Terms & Conditions

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Shown above is the page where it displays a record of jobs that a jobseeker has applied for. It serves as a tracking tool, allowing jobseekers to monitor their application history and view their status.

## Appendix K

### Curriculum Vitae

Name: France Jell J. Jurane  
Nickname: Francel  
Date of Birth: December 27, 2001  
Place of Birth: Cotabato City  
Home Address: Brgy. Rizal, Molave, Zamboanga del Sur  
Sex: Male  
Civil Status: Single  
Name of Mother: Jennifer J. Jurane  
Name of Father: Florante D. Jurane  
Contact Number: 09396068704  
Email Account: [juranefrancejell@gmail.com](mailto:juranefrancejell@gmail.com)



#### ACADEMIC BACKGROUND

##### **College**

Course: Bachelor of Science in Computer Science  
School: Western Mindanao State University-External Studies Unit  
Address: Bulatok, Pagadian City  
Year: 2020-2024

##### **Senior High**

Strand: TVL  
School: Molave Vocational Technical School  
Address: Mabini St., Molave, Zamboanga del Sur  
Year: 2018-2020

##### **Junior High**

School: Molave Vocational Technical School  
Address: Mabini St., Molave, Zamboanga del Sur  
Year: 2014-2018

##### **Elementary**

School: Sero Central Elementary School  
Address: Cotabato City  
Year: 2008-2014

#### ROLE & RESPONSIBILITY

- **Project Manager** – Responsible for coordinating team members, allocating resources, and ensuring that project objectives were met efficiently and effectively.
- **Archivist** – Responsible with managing and preserving records, documents, and other valuable historical materials.
- **System Analyst** – Responsible to analyze and evaluate organizational systems, processes, and technologies to identify opportunities for improvement and optimization.

# CURRICULUM VITAE

Name: Nicko M. Balboa  
Nickname: Jeck2x  
Date of Birth: January 23, 2001  
Place of Birth: Pagadian City  
Home Address: Sta. Lucia, Pagadian City  
Sex: Male  
Civil Status: Single  
Name of Mother: Jenelyn M. Balboa  
Name of Father: Arky C. Balboa  
Contact Number: 09366315091  
Email Account: [nickojek2x@gmail.com](mailto:nickojek2x@gmail.com)



## ACADEMIC BACKGROUND

### College

Course: Bachelor of Science in Computer Science  
School: Western Mindanao State University-External Studies Unit  
Address: Bulatok, Pagadian City  
Year: 2020-2024

### Senior High

Strand: TVL  
School: Sta. Lucia National High School  
Address: Sta. Lucia, Pagadian City  
Year: 2018-2020

### Junior High

School: Sta. Lucia National High School  
Address: Sta. Lucia, Pagadian City  
Year: 2014-2018

### Elementary

School: Sta. Lucia Central Elementary School  
Address: Sta. Lucia, Pagadian City  
Year: 2008-2014

## ROLE & RESPONSIBILITY

- **Programmer** – Responsible in developing and implementing software solutions to address complex business challenges. Proficient in multiple programming languages, including PHP, Javascript, Python, and Rust with a strong foundation in software development methodologies and best practices. Dedicated to staying updated on emerging technologies and continuously enhancing programming skills to deliver innovative solutions.

# CURRICULUM VITAE



Name: Angelito S. Piedad Jr.  
Nickname: Arcy  
Date of Birth: October 03, 2001  
Place of Birth: ZDS Provincial Hospital  
Home Address: Bulatok Pagadian City Zamboanga del Sur  
Sex: Male  
Civil Status: Single  
Name of Mother: Uly S. Piedad  
Name of Father: Angelito M. Piedad, Sr.  
Contact Number: 09612979483  
Email Account: [apiedadjr@gmail.com](mailto:apiedadjr@gmail.com)

## ACADEMIC BACKGROUND

### College

Course: Bachelor of Science in Computer Science  
School: Western Mindanao State University-External Studies Unit  
Address: Bulatok, Pagadian City  
Year: 2020-2024

### Senior High

Strand: TVL  
School: West Prime Horizon Institute, Inc  
Address: San Francisco Dist, Pagadian City, Zamboanga del Sur  
Year: 2018-2020

### Junior High

School: Zamboanga Del Sur National High School  
Address: Sta. Maria Pagadian City, Zamboanga del Sur  
Year: 2014-2018

### Elementary

School: Bulatok Elementary School  
Address: Bulatok Pagadian City  
Year: 2008-2014

## ROLE & RESPONSIBILITY

- **System Tester** – Responsible for creating test plans, executing test cases, and identifying defects to ensure the reliability and functionality of software applications. Strong problem-solving abilities and a meticulous approach to analyzing and troubleshooting issues.