

ABSTRACT

In the current era, many Indonesian citizens are still unable to secure employment. According to the latest data from the Central Statistics Agency (BPS), as of February 2022, Indonesia's unemployment rate was recorded at 8.4 million individuals, accounting for 5.83% of the total workforce of 144.04 million people. The digital search for job vacancies has become a common practice in today's time. Numerous companies provide job openings through their websites, such as Karir.com and LinkedIn. The quantity of job vacancies posted reaches thousands, even tens of thousands, which creates difficulties for applicants in finding jobs that align with their qualifications.

As a result, we have developed a website based on Beautiful Soup and Natural Language Processing. This website is designed to provide convenience to users seeking jobs by inputting their skills and expertise. Consequently, job openings from various sources that match the users' skills and expertise will appear. The created website can aggregate job vacancies from multiple sources using Beautiful Soup and Selenium as components for data scraping. This process aims to facilitate users in searching for their desired jobs, aligned with their expertise. Additionally, Natural Language Processing (NLP) is utilized to match applicants' skills with job requirements. NLP also serves to filter keywords in job descriptions, converting them into datasets.

Research findings demonstrate the successful accuracy testing of the website. The data entered by users into the website form is accurately stored in the database at a 100% success rate, without discrepancies. The web crawling process effectively incorporates data into the website without issues. The NLP scoring process also displays a high level of accuracy in assessing the suitability of user skills. The efficiency of the web crawling process using the Beautiful Soup library takes 34 seconds, while the Selenium library requires 1 minute 31 seconds. The speed of loading the website from login to job descriptions takes 14 seconds. In conclusion, the overall results exceed the set targets.

Keywords: RPA, AI, NLP, website, data scraping, Google Form, UiPath.