FINAL YEAR PROJECT REPORT

EFFICIENT RECRUITEMENT SYSTEM USING AI

In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)

By

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SUPERVISED

BY
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BAHRIA UNIVERSITY (KARACHI CAMPUS)

SPRING-2024

DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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APPROVAL FOR SUBMISSION

We certify that this project report entitled **EFFICIENT RECRUITMENT SYSTEM USING AI** was prepared by **ARQAM WADIWALA, RANA MUHAMMAD SHAMAS, JUNAID NADEEM** has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Science in Computer Science at Bahria University, Karachi.

Approved by,

Signature : _____

Supervisor : Dr Talha Ahmed Khan

Date : 20-5-2024

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We would like to thank everyone who had contributed to the successful completion of this project. We would like to express my gratitude to my project supervisor, Dr. Talha Ahmed Khan for his invaluable advice, guidance and his enormous patience throughout the development of the research.

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EFFICIENT RECRUITMENT SYSTEM USING AI

ABSTRACT

The project objective is to develop a web application that would facilitate the hiring process to be faster and easier for both recruiters and candidates. Companies can take a lot of time screening resumes at the on set of the recruitment process. This app brings more convenience with its simple structure that allows recruiters to post jobs and applicants to upload their resumes.

For even faster communication, the app utilizes the latest technology such as machine learning for the purpose of connecting candidates' resumes to job listings. When a recruiter uploads a job, the system will start matching resumes to the job descriptions filled in. Recruiters can then rank resumes using their relevance to the position and have the system sort the top candidates first; applicants will not see this ranking.

For this the utilization of NLP tools like SpaCy and Large Language Models (LLMs). For example even in our initial testing phase the system was able to read 50 resumes in just 25 minutes which shows both the speed and efficiency characteristics of the system. This performance enables recruiters to identify high-quality candidates in a short amount of time, thus saving recruiters the time of sifting through numerous resumes during the initial selection process.

Further, they can develop online quizzes that assess applicants' abilities. These quizzes can be designed according to the competencies that the employee needs to possess for the job. It also connects with the video-conference applications used for interviewing candidates, making scheduling virtual meetings easier within the app.

So by providing all these features under one roof this app helps in modernizing the entire hiring process from saving time of recruiters to making the process convenient and easy for candidates as well. For instance, hiring managers who utilized our platform during our beta testing claimed that the initial stages of their hiring process were reduced by 40 percent, while applicants saw an average of 30 percent faster response rates from recruiters.

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