UNIVERSITI TEKNOLOGI MARA

DEVELOPMENT OF AN E-RECRUITMENT SYSTEM BASED ON INFORMATION RETRIEVAL FOR MISTER COFFEE

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ABSTRACT

The This project focuses on the development of an E-Recruitment System for Mister Coffee to address the inefficiencies of the existing manual and fragmented recruitment process. The current recruitment practice relies on multiple platforms and manual resume screening, which results in difficulties in applicant tracking, time-consuming screening activities, inconsistent evaluation, and limited transparency of application status. These challenges highlight the need for a centralised and systematic recruitment solution to improve efficiency and decision-making during the hiring process. Accordingly, this project aims to identify system requirements, design and develop an E-Recruitment System, and evaluate its functionality and usability. A modified Waterfall model was adopted as the system development methodology, comprising requirements analysis, system design, implementation, system testing and documentation. The novelty of the system lies in the integration of Information Retrieval techniques using Term Frequency–Inverse Document Frequency (TF-IDF) and a hybrid scoring mechanism that combines rule-based form scoring and resume-based scoring to support objective and systematic candidate screening using both structured application data and unstructured resume content. The system also incorporates a Job Matching and Ranking module to assist applicants in identifying suitable job opportunities prior to application submission. The developed system provides an online recruitment platform that supports job posting, online application, applicant management, application status tracking and intelligent screening for HR personnel, while enabling applicants to submit applications and monitor their progress in real time. Functional testing confirmed that all core system features operate correctly. Usability evaluation using the System Usability Scale (SUS) achieved a score of 88.58, indicating excellent usability and strong user acceptance. Overall, the results demonstrate that the E-Recruitment System successfully improves recruitment efficiency, transparency and screening consistency, and provides a practical decision-support solution for recruitment activities at Mister Coffee.