



FINAL YEAR PROJECT REPORT

EFFICIENT RECRUITMENT SYSTEM USING AI

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

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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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In addition, we would also like to express my gratitude to our loving parents and

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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.

TABLE OF CONTENTS

DECLARATION	ii
APPROVAL FOR SUBMISSION	iii
ACKNOWLEDGEMENTS	v
ABSTRACT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xi
LIST OF FIGURES	xii
LIST OF APPENDICES	xiii
CHAPTER	
CHAPTER 1	1
INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement	2
1.3 Main Objectives	2
1.4 Scope of Project	3
CHAPTER 2	4
LITERATURE REVIEW	4
2.1 Introduction	4
2.2 Existing Work	4
2.2.1 Deep Learning-Based Resume Matching	5
2.2.2 NLP-Based Resume Score Generation	6
2.2.3 Graph Neural Network for Resume Matching	6
2.2.4 Hybrid Model for Resume Matching and Score Generation	6
2.2.5 Reinforcement Learning for Resume Score Generation	6

2.2.6	Context-Aware Resume Matching	7
2.3	Conclusion	7
CHAPTER 3		11
REQUIREMENT SPECIFICATIONS		11
3.1	Existing System	11
3.2	Proposed System	11
3.3	Requirement Specifications	12
3.3.1	Functional Requirements:	12
3.3.2	Non-Functional Requirements:	12
3.4	Use Cases	13
3.4.1	Use-Case 1: User Registration	13
3.4.2	Use Case 2: Job Posting	13
3.4.3	Use Case 3: Resume Submission	13
3.4.4	Use Case 4: Job Application	14
3.4.5	Use Case 5: Resume Matching	14
3.4.6	Use Case 6: Candidate Shortlisting	14
3.4.7	Use Case 7: Interview Scheduling	14
CHAPTER 4		15
DESIGN AND METHODOLOGY		15
4.1	Resume & Job Description Extraction and Pre-processing	15
4.1.1	Data Collection:	15
4.1.2	Preprocessing:	15
4.1.3	Feature Extraction:	15
4.1.4	Feature Comparison:	15
4.2	Web Portal Display:	16
4.2.1	Portal Architecture	16
4.2.1.3	Recruiter Dashboard	16

	ix
4.2.1.4 Candidate Dashboard	17
4.2.1.5 Security Measures	17
CHAPTER 5	18
SYSTEM IMPLEMENTATION	18
5.1 Job Posting and Job Description Storage	18
5.2 Job Posting Interface	18
5.3 Database Storage	18
5.4 Candidate Signup	20
5.5 Resume Parsing	20
5.6 Job Application	22
5.7 Resume Matching	22
5.8 Candidate Shortlisting	22
5.9 Sending Notifications	22
5.10 Technical Stack	22
5.10.1 Frontend	22
5.10.2 Backend	22
5.10.3 Resume and Job Description Parsing	23
5.10.4 Scoring and Matching	23
5.10.5 Database	23
5.10.6 System Modules	23
5.11 Conclusion	28
CHAPTER 6	29
SYSTEM TESTING AND EVALUATION	29
6.1 Testing Methodology	29
6.1.1 Unit Testing	29
6.1.2 Integration Testing	29
6.1.3 User Acceptance Testing (UAT)	30

	x
6.2 Evaluation	30
6.2.1 Performance Evaluation	30
6.2.2 Accuracy Evaluation	30
6.2.3 User Satisfaction Evaluation	31
6.3 Conclusion	31
6.4 Test Cases	32
CHAPTER 7	35
CONCLUSION	35
REFERENCES	37