AI- BASED JOB SEARCHING AND HIRING RECOMMENDATION SYSTEM
A PROJECT REPORT

Submitted by

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At

PRESIDENCY UNIVERSITY

BENGALURU

DECEMBER 2025

PRESIDENCY SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

BONAFIDE CERTIFICATE

Certified that this report "AI-Based Job Searching and Hiring Recommendation System " is a bonafide work of "Kovuri Vasif Afridi (20221CSE0175), Venkat Prakash Chowdary(20221CSE0157), Manchineni Mohan Ganesh (20221CISE0191)", who have successfully carried out the project work and submitted the report for partial fulfilment of the requirements for the award of the degree of BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE AND ENGINEERING, during 2025-26.

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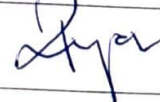
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DECLARATION

We the students of final year B.Tech in COMPUTER SCIENCE AND ENGINEERING, at Presidency University, Bengaluru, named Kovuri Vasif Afridi, Chimbili Venkat Prakash Chowdary, Mohan Ganesh, hereby declare that the project work titled "AI- Based Job Searching And Hiring Recommendation System " has been independently carried out by us and submitted in partial fulfillment for the award of the degree of B.Tech in COMPUTER SCIENCE ENGINEERING, during the academic year of 2025-26. Further, the matter embodied in the project has not been submitted previously by anybody for the award of any Degree or Diploma to any other institution.

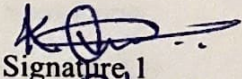|		
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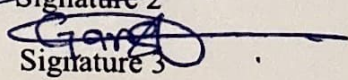
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Abstract

The process of job searching has undergone a significant transformation with the advent of digital recruitment platforms, yet traditional job portals still face challenges in delivering relevant and personalized job recommendations. These platforms often rely on keyword-based search algorithms, which do not account for the full range of a jobseeker's experience, skills, and aspirations. This project presents the development of an AI-powered Job Searching Application designed to overcome these limitations by providing personalized, accurate, and context-aware job recommendations.

The system utilizes Natural Language Processing (NLP) to analyze and extract key information from resumes, and employs machine learning algorithms to create a semantic understanding of both resumes and job descriptions. By transforming resumes and job descriptions into vector embeddings, the application is able to match jobseekers to positions based on deeper, contextdriven similarities rather than simple keyword matching. Furthermore, the system offers valueadded features such as resume feedback, skill-gap analysis, and automatic cover letter generation, all powered by AI.

Evaluation results demonstrate that the application offers enhanced job matching accuracy and improved user engagement compared to traditional job portals. This AI-based approach not only improves the quality of job recommendations but also reduces the time and effort required in the job search process. The project highlights the potential of AI and NLP in revolutionizing the recruitment industry, providing a more efficient, personalized, and transparent jobsearching experience for both jobseekers and employers.