Tamil Nadu Open University

SYNOPSIS OF PROJECT WORK

(MCA-26)

Title:

AI-Enabled Applicant Tracking System (ATS) for Smart Recruitment

Objectives:

- To automate and streamline the recruitment process using AI-enhanced applicant tracking technology.
- To reduce manual workload on recruiters and improve candidate shortlisting accuracy.
- To deliver a scalable, user-friendly solution for real-world HR use.

Category of Software/Application:

Web-based application with artificial intelligence integration for recruitment management.

Abstract:

The rapid digital transformation of recruitment processes has created a need for advanced, efficient, and intelligent applicant tracking systems. This project aims to develop an AI-Enabled Applicant Tracking System (ATS) that streamlines and automates the recruitment workflow for organizations, utilizing artificial intelligence to enhance candidate shortlisting and decision-making.

The proposed system will facilitate end-to-end recruitment management—from posting job openings and collecting applications to automated resume screening and interview scheduling. The AI component will assist in the preliminary screening of candidates by analyzing resumes for relevant skills, experience, and keywords; ranking applicants based on job-specific criteria; and identifying the top-fit profiles for further evaluation. The solution will also maintain a searchable candidate database, track the status of each application, and provide intuitive dashboards for recruiters and management.

Key modules include:

- Job Posting and Management
- Application Management
- AI-Based Resume Screening
- Interview Scheduling and Notification
- Candidate Database and Search
- Recruitment Status Tracking and Report Generation

This project leverages modern web technologies and simple AI algorithms to ensure scalability, accuracy, and ease of use. The system is designed to reduce recruitment time, minimize manual effort, and improve the quality of hiring decisions, benefiting both employers and job seekers in a competitive market.

Key features include:

- End-to-end recruitment management: posting jobs, collecting applications, AI-powered resume screening, scheduling interviews.
- AI module for analyzing resumes (skills, experience, keywords), ranking applicants, and identifying top profiles.
- Searchable candidate database, application status tracking, intuitive dashboards for recruiters and management.

Full Details of the Project:

- The system will support multi-level user roles: recruiter, admin, and candidate.
- Admins/recruiters can create and manage job postings and review candidate progress.
- Candidates can register, submit applications, and receive notifications.
- AI algorithms implemented for parsing, matching, and ranking candidates' resumes.
- Reports and dashboards will provide insights on recruitment statistics.
- Web-based user interface developed with modern frameworks.

Limitations:

- Advanced ML/NLP-based screening limited to prototype/demo due to scope and resource constraints.
- Email/SMS notification features may rely on third-party services or simulation.
- Security and data privacy are designed for educational demonstration, not enterprise production.

Expected Outcomes:

- A functional ATS application supporting end-to-end smart recruitment.
- Demonstrated reduction in manual screening effort and time-to-hire.
- Well-documented modular codebase and system/user documentation.

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