



**NATIONAL UNIVERSITY**  
of Computer & Emerging Sciences

## **Project Proposal:**

**RecruitFlow – A centralized hub connecting employers and job seekers**

**Submitted To:**

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## **Introduction:**

This system streamlines hiring and onboarding through AI-driven job matching, MongoDB based database management,. It automated resume screening, tracks applications, and enhances employee onboarding.

## **Scope & Objectives:**

- AI-powered resume parsing and job recommendations.
- Automated applicant tracking and interview scheduling.
- Secure authentication for applicants and recruiters.
- Data-driven hiring analytics for recruiters.

## **Key Features:**

### **□ User Registration & Authentication:**

- Secure **role-based access control** for job seekers, recruiters, and admins.
- **OAuth-based authentication** (Google, or email/password login).
- **Password encryption & recovery mechanisms** for security

### **□ Job Search & Application:**

- **Advanced filtering options** (location, experience level, skills, industry, salary, etc.).
- **AI-powered job recommendations** based on resume analysis and past applications.
- **One-click application** feature with resume and cover letter attachments.

□

### **Application Tracking System (ATS):**

- **Interactive dashboard** for job seekers to track application status (applied, shortlisted, interviewed, hired/rejected).
- **Recruiter view** for tracking applicants per job post and filtering top candidates.
- **Data-driven analytics** showing applicant engagement, response rates, and hiring trends

### □ **Interview Scheduling & Notifications:**

- **Automated interview scheduling** based on candidate and recruiter availability.
- **Real-time notifications & reminders** via email and in-app alerts.
- **(Extra )Integration with video conferencing tools** (Zoom, Google Meet, or Microsoft Teams).

### □ **Recruiter Job Management:**

- **Job posting module** allowing recruiters to create and manage job listings.
- **Real-time updates & job status tracking** (open, closed, under review).
- **Performance insights** on job postings, including applicant trends and hiring efficiency.

### □ **Admin Panel:**

- **User management** for job seekers, recruiters, and companies.
- **Security monitoring & compliance checks** to ensure data integrity.
- **Reporting & analytics dashboard** for tracking system performance.

### □ **(Extra if we get time ) AI Resume Parsing & Matching:**

- Automatic skill extraction from resumes using Natural Language Processing (NLP).
- Job matching algorithm that ranks candidates based on skills, experience, and job fit.
- Dynamic resume recommendations for applicants based on trending industry demands.

# **Technologies & Implementation:**

## **Frontend:**

ReactJS with some UI Libraries like Chakra UI ect

## **Backend:**

NodeJS , ExpressJS MongoDB Database, AI Resume Parser(optional), REST APIs

## **Security:**

Role-based access,Password Encryption.

## **Future Enhancements:**

- ✓ AI Chatbot for job search assistance.
- ✓  
Blockchain-based credential verification.
- ✓  
Multi-user VR training & gamified assessments.
- ✓  
Job market analytics dashboard.

## **Conclusion:**

This system streamlines recruitment by offering efficient **job tracking, interview scheduling, and recruiter-friendly job management**. It simplifies hiring for employers and enhances the application process for job seekers. Future upgrades will further optimize hiring insights and onboarding, making it a complete recruitment solution..