PROJECT REPORT

Name:Thriambak S
Intern

Topic: Employee Recruitment Website

Project Overview

The Employee Recruitment Website was developed using Flask as the web framework and SQLite ORM for the database backend. The platform facilitates job recruitment by providing two modules: one for users and another for administrators. The platform's primary functionalities include job listing management, user profile handling, job application tracking, and communication between users and administrators.

Key Features

- User Dashboard: Allows job seekers to browse and apply for jobs.

- Admin Dashboard: Enables administrators to manage job listings, review job applications, and interact with users.

- Database Integration: Maintains five tables for managing user, admin, job, application, and notification data.

- Resume Upload: Users upload their resumes, which are stored securely in the system.

- Notifications: Enables communication between admin and users regarding application statuses.

Modules Description

1. User Module

Features:

- User Login: Users log in to access the user dashboard.

User Dashboard:

- Top Bar:
- Profile: Displays user profile details.
- Settings: Allows users to configure their account preferences.
- Logout: Logs the user out of the system.

Middle Section:

- Job Listings: Displays jobs created by the admin.
- Apply for Jobs: Users can click on the "Apply" button to submit applications. The application details, including the user’s resume, are stored in the job_application table.

Left Navigation Bar:

- Resume & Certification: Users upload their resumes, which are saved as paths in the resume_certification table and stored in an "uploads" folder.

- Application History: Displays the status of user job applications.

- Notifications: Displays messages from admins regarding job applications or other updates.

- Feedback & Reviews: Allows users to send feedback or revie ws to admins.

- Explore Page: Offers advanced job search options with multiple fields for filtering job listings.

2. Admin Module

Features:

- Admin Login: Admins log in to access the admin dashboard.

Admin Dashboard:

- Statistics Overview: Displays the number of jobs, users, and pending reports.

Manage Jobs:

- Add Jobs: Admins can add new job listings to the database. These jobs appear on the user dashboard.

- Update/Delete Jobs: Admins can update job details or delete jobs, which removes the entries from the database.

Manage Users:

- Displays a list of all users, including their resumes and other details.

- Admins can view user profiles or delete users, which removes their data from the database.

Pending Job Applications:

- Displays applications submitted by users, including user details and a link to their resume.

- Admins can accept or reject applications. The decision is reflected in the job_application table, and the user is notified through the notifications page in their dashboard.

Database Design

The project uses SQLite ORM to manage the database, which consists of five tables:

- user Table: Stores user and admin details.
- jobs Table: Contains job details created by admins.
- jobapplication Table: Tracks job applications submitted by users.
- resumecertification Table: Stores paths to uploaded resumes.
- notifications Table: Records messages from admins to users.

Implementation Details

Backend:

- Developed using Flask, a lightweight Python web framework.
- Utilized SQLite ORM for database management, ensuring efficient data handling and integration.
- Implemented modular design principles with separate routes for user and admin functionalities.

Frontend:

- Designed with a clean, user-friendly interface to enhance usability.

- Responsive design ensures compatibility across devices.

- Included intuitive navigation bars and categorized features for easy access.

Functional Workflow:

- Users or admins log in to their respective dashboards.

- Users can browse job listings, upload resumes, and apply for jobs.

- Admins manage jobs, review applications, and communicate with users.

- Notifications and status updates are sent to users for every application decision.

Security Features:

- Authentication: Ensures secure login for both users and admins.

- File Management: Resumes are stored in a secure "uploads" folder and linked to the database.

- Data Validation: Validates all user inputs to prevent SQL injection and other vulnerabilities.

Advanced Functionalities:

- Search and Filter: Users can perform advanced job searches based on keywords, location, and job type.
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- Feedback System: Users can provide feedback to admins, fostering communication and improving the platform.
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- Status Updates: Real-time updates for users on their application status, enhancing engagement.

Conclusion

- The Employee Recruitment Website is a robust platform that simplifies the recruitment process for both job seekers and administrators. With a focus on user-friendliness and efficient data management, the website addresses core requirements of job application systems.

Future Enhancements:

- Role-Based Access Control: Implement stricter role management for users and admins.

- Analytics Dashboard: Integrate analytics for recruitment trends, such as the number of applications and user engagement.

- Email Notifications: Notify users and admins via email for critical updates.

- Cloud Integration: Migrate the database to a cloud service for enhanced scalability and reliability.

References

- Flask Documentation: https://flask.palletsprojects.com

- SQLite Documentation: https://sqlite.org/docs.html

- Python Documentation: https://docs.python.org