SmartJob Aggregator

Intelligent Job Search & Resume Automation Platform

Abstract

In the current competitive job market, candidates often struggle with a fragmented landscape where opportunities are scattered across multiple platforms (LinkedIn, Indeed, Glassdoor, etc.). Additionally, tailoring resumes to pass Application Tracking Systems (ATS) is a time-consuming and often misunderstood process.

SmartJob Aggregator addresses these challenges by providing a unified platform that aggregates job listings from various sources into a single, searchable interface. Beyond simple aggregation, the platform features an intelligent "Smart Profile" system that centralizes user data and dynamically generates professional, ATS-optimized PDF resumes. By streamlining the search process and automating resume creation, SmartJob Aggregator significantly reduces the friction of job hunting, allowing candidates to focus on preparation rather than administration.

Technologies & Tools

User Interface (Frontend)	Next.js 14, React, TypeScript, Tailwind CSS
Backend API	FastAPI (Python), Pydantic
Database	SQLAlchemy ORM (SQLite/PostgreSQL)
PDF Generation	ReportLab, PyPDF2
Authentication	JWT (JSON Web Tokens), BCrypt
Data Processing	BeautifulSoup (Web Scraping)

Key Features

- **Aggregated Job Search:** Real-time job listings from multiple major platforms in one tailored feed.
- **Smart Profile Management:** Deeply structured user profiles (Education, Projects, Experience) that serve as a single source of truth.
- **Dynamic Resume Builder:** One-click generation of ATS-friendly PDF resumes (Modern & Classic templates) with neat bullet points and optimized executive summaries.

- ●**Secure Authentication:** Robust user security with encrypted passwords and token-based sessions.
- ●**Responsive Design:** A premium, accessible dark-mode UI that works seamlessly across desktop and mobile devices.

Conclusion

SmartJob Aggregator successfully modernizes the job application lifecycle. By combining powerful aggregation algorithms with automated document generation, it serves as a comprehensive career assistant that empowers users to present their best selves to potential employers with minimal effort.