

AI Job Application Playbook: Automate Your Search with Open-Source Tools

This playbook shows job seekers how to automate their job applications using open-source tools like Scrapy, ScrapGraphAI, and Crawllee — without spending a dime on proprietary software.

1. Identify Your Target Companies Using Web Scraping

Use **Scrapy** or **Crawllee** to build a list of companies that match your ideal job profile. These tools are fast, reliable, and can be used in commercial applications under permissive licenses like MIT or BSD-3-Clause.

2. Scrape Job Postings for Keywords

Leverage **Trafilatura** or **ScrapeGraphAI** to extract clean HTML content from job boards. Both support commercial use and are licensed under Apache-2.0 or MIT respectively, so they're safe for personal or business automation projects.

3. Create a Custom Application Template

Build a standardized cover letter and resume template using **Automatisch**, an open-source automation tool with AGPLv3 core that allows commercial use when not modified. This makes it ideal for job seekers to streamline their application process.

4. Track Application Status Automatically

Use **Automatisch** to set up a workflow that tracks your submitted applications, sending you reminders or updating spreadsheets automatically based on your preferences — no more manual tracking!

5. Extract Contact Information from Job Listings

Scrape company websites for contact details using tools like **Scrapy**, **Crawllee**, or even **Trafilatura** to compile a list of hiring managers and direct contacts.

6. Build Your Local LLM Agent Using Fastio Benchmarks

Follow the benchmarked local LLM runners from *Best Local LLM Runners for Agents (2025)* to create an AI agent that helps draft applications or analyze job descriptions locally — keeping your data private and secure.

7. Automate Resume Customization

Use **Automatisch** workflows to dynamically insert company-specific keywords into your resume using scraped data from job postings — all without needing a premium subscription.

8. Use MCP Agents for Seamless Integration

Integrate with **MCP servers** using the open-source API agent launched by Agoda. This allows you to connect scrapers, LLMs, and automation tools in one cohesive pipeline for faster job hunting.

9. Run Scraping Jobs Locally Using MOO Resources (Commercial Tool)

While not open-source, **MOO Resources** can be used alongside open-source tools to organize your scraped data and automate workflows. Its commercial use is supported through a paid license, so it's an optional add-on for advanced users.

10. Optimize Your Job Search with GNU Support Documentation

Consult the documentation from *GNU.Support* — a resource website with freely available materials under Creative Commons Attribution-ShareAlike 3.0 License — to understand how to better manage your job search using GNU tools and workflows.

11. Integrate Your Data Using Apify's Scraping Libraries (2026)

Use libraries mentioned in *Apify Blog* such as **BeautifulSoup**, **Selenium**, or **Scrapy** for scraping job boards, even though the blog doesn't list specific licenses — these are typically MIT or BSD licensed and safe for commercial use.

12. Build a Smart Application Tracker

Create a dashboard using open-source tools like **Automatisch** and local LLMs to track your applications, note down interview dates, and analyze which job types have the highest success rate.

13. Use Web Scraping Libraries for Competitive Intelligence

Leverage tools like **Scrapy**, **Crawlee**, or **ScrapeGraphAI** to monitor competitor companies' job postings and identify trends in hiring patterns — useful