PROJECT PITCH · AI AGENTS · WESTFÄLISCHE HOCHSCHULE

The job hunt, minus the busywork

An AI agent that finds German tech jobs, ranks them against your real experience, and writes a tailored CV and cover letter for each one — so applying takes minutes, not an evening.

4 boards	**0–100**	**2 PDFs**	**You submit**
searched in one query	explainable match score	CV + letter, per job	never an auto-apply bot

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THE PROBLEM

Applying for jobs is a second job

Three things make the German job hunt exhausting — and all three can be automated without removing the human from the decision.

Fragmented

The same role sits on LinkedIn, StepStone, Xing and the Arbeitsagentur. You search four sites and read the same job four times.

Repetitive

Every serious application means rewriting your CV and cover letter for that posting. 30–60 minutes, each time.

No feedback

You never learn which skills the market rewards, or which kind of application actually got a reply.

So people either spray generic applications everywhere — or burn out perfecting three. Both lose.

THE SOLUTION

One agent, the whole loop

Find
4 boards, full descriptions, duplicates merged

→

Match
scored 0–100 against your real experience

→

Apply
tailored CV + cover letter in one click

→

Improve
learns from interviews and offers

Grounded in you

Upload your CV once and the AI turns it into a reviewed **experience base** — you confirm every entry. Every score and every document is built from what you have actually done. It never invents an employer, a date or a skill.

You stay in control

The agent prepares the application; **you** press submit. No stored job-board credentials, no terms-of-service violations, nothing sent without a human read.

THE DEFINING DESIGN DECISION

An assistant — not an auto-apply bot

The most requested "feature" in this space is the one we deliberately refused to build.

It would be reckless

Automatic submission breaks job-board terms of service, needs your login credentials stored somewhere, and breaks the day a form or bot-check changes.

It would also fail you

Applications fired off without a human read are exactly the low-effort spam recruiters filter out. Volume was never the bottleneck — quality per application is.

So we built the Apply Assistant

Tailored CV, cover letter, the posting link and a pre-submit checklist, prepared in one click. You review and send in under a minute.

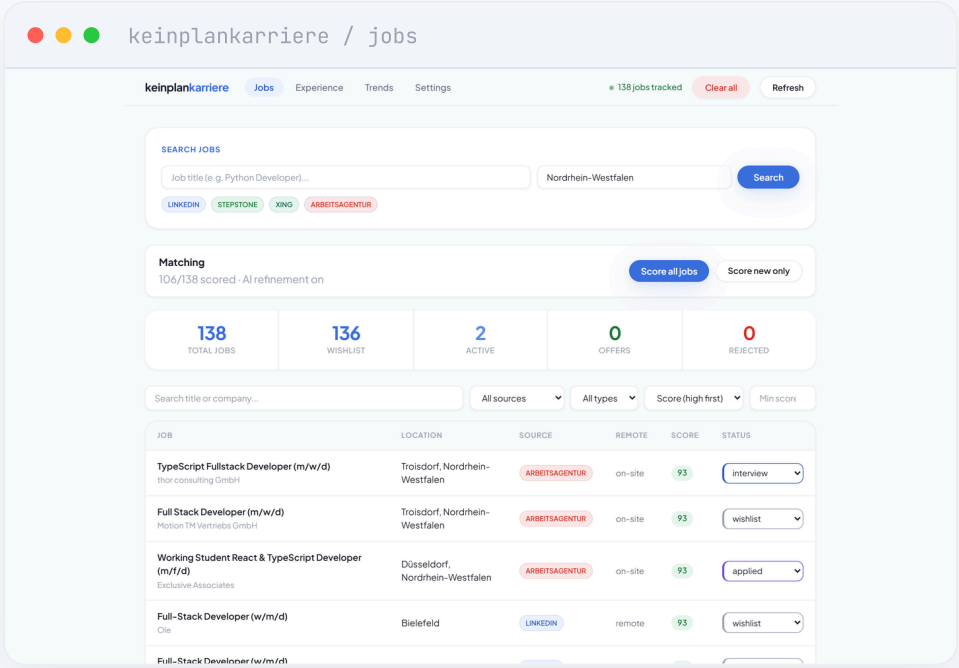
The busywork disappears. The judgement stays human.

01 · FIND

Four job boards, one clean list

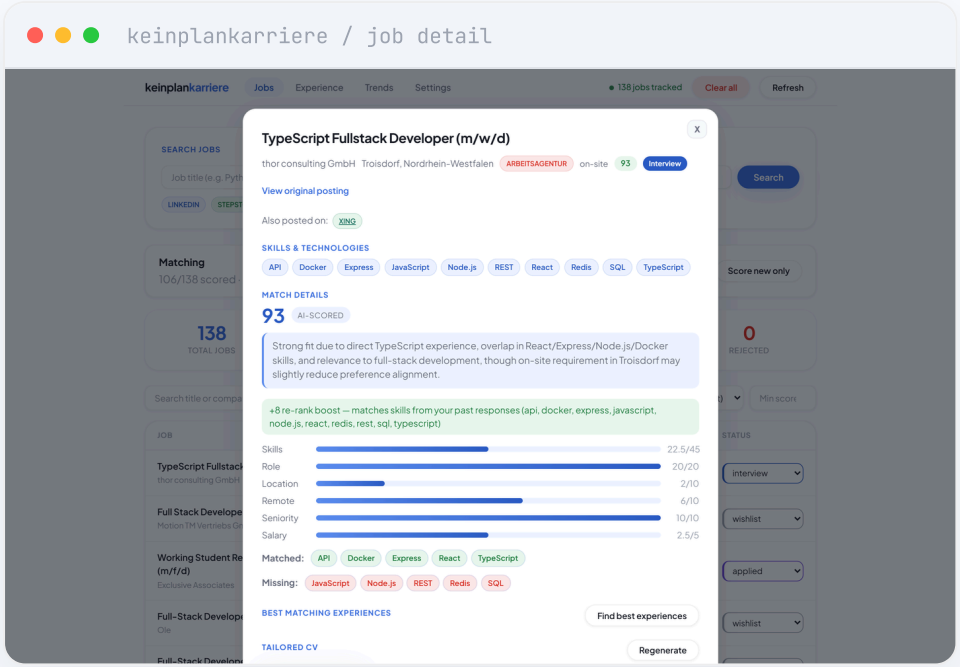
LinkedIn StepStone Xing Arbeitsagentur

- One search queries all four boards in parallel
- The **full description** of every posting is fetched — the fuel for everything downstream
- Skills extracted from a curated German/English taxonomy
- Fuzzy matching merges the same role across boards into a single entry
- Applications tracked through wishlist → applied → interview → offer

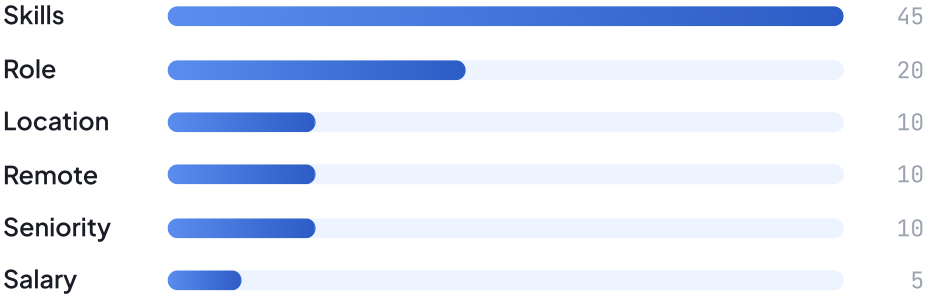


02 · MATCH

A score you can argue with



Layer 1 — deterministic, every job



Layer 2 — AI on the top candidates

The model reads the posting *and* your experiences, re-scores, and justifies itself in a sentence. Unchanged jobs reuse a cached verdict, so a repeat run costs nothing.

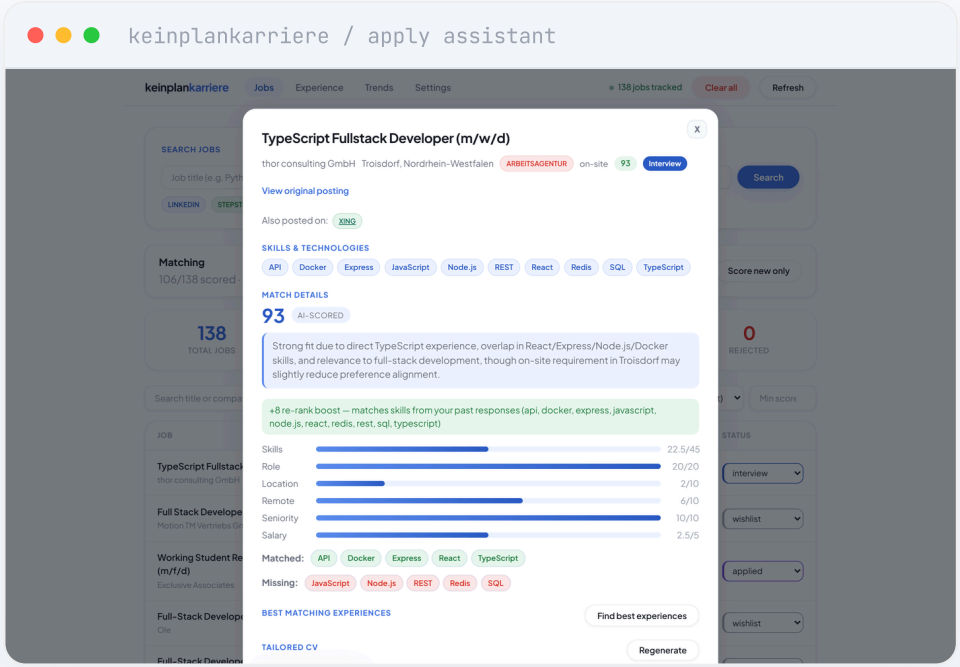
03 · APPLY

From “interesting” to application-ready

- **Tailored CV** — your LaTeX résumé, every bullet rewritten toward this posting, **nothing dropped**
- **Cover letter** — grounded in your experience, compiled to PDF
- **Apply link + checklist**, then “mark as applied”
- Your CV photo, your prompt add-ons, your own template

It always produces a valid PDF

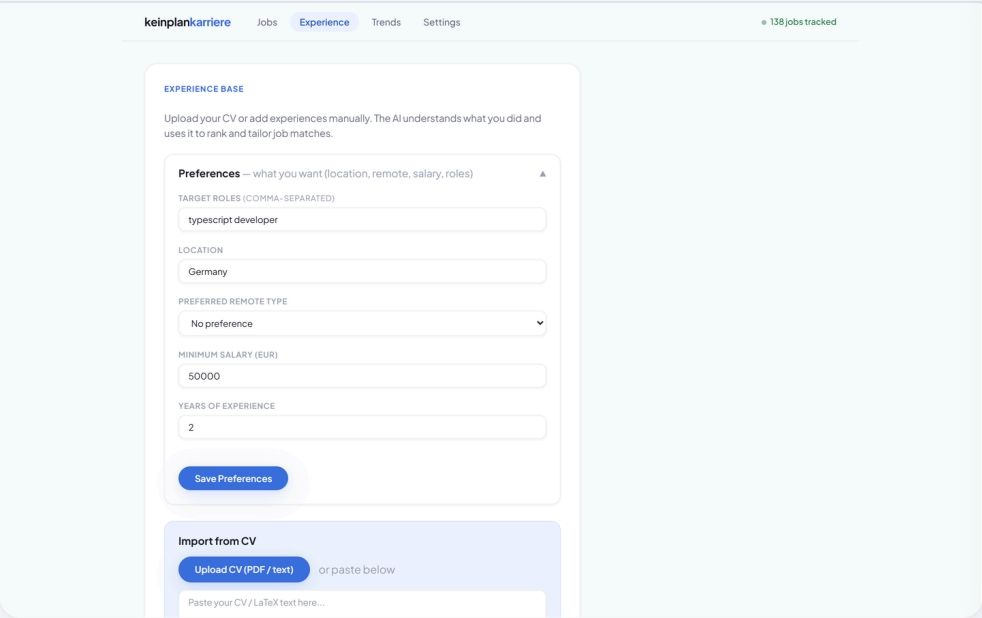
Documents are compile-validated with Tectonic. If a tailored version fails, it repairs once, then falls back to your known-good template.



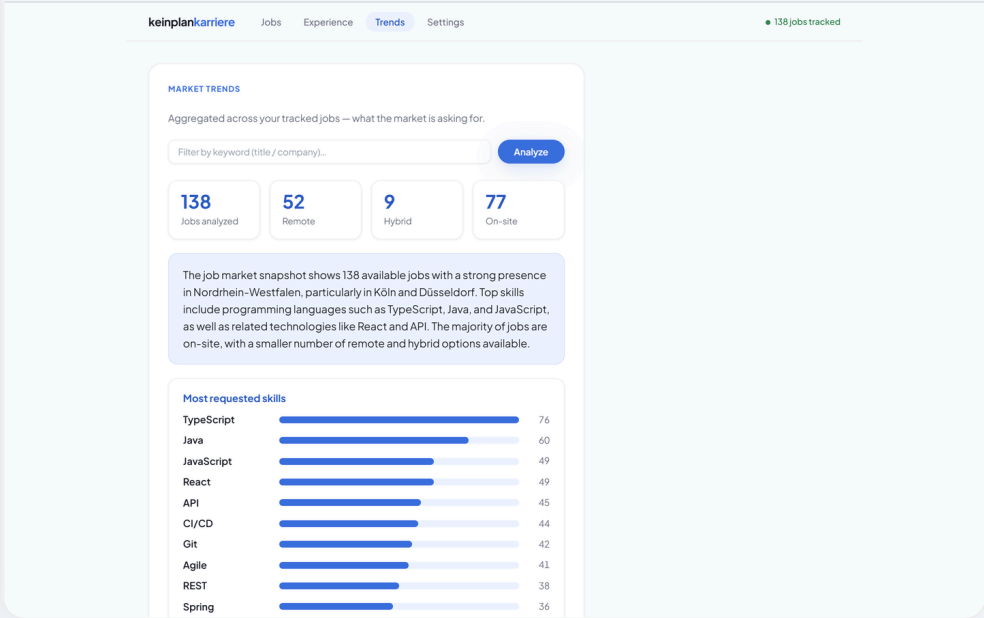
04 · IMPROVE

It gets better the more you use it

experience base



market trends



Your experience base

Parsed from your CV by the AI, reviewed by you, and reused by every score and document.

Market trends

The skills actually in demand, salary ranges, remote split and the busiest employers — a by-product of structured data.

Outcome re-ranking

Mark a job as interview or offer and similar jobs rise; the AI scorer is told what has been working.

ENGINEERING

Small stack, built to survive

ONE DOCKER IMAGE

FastAPI · SQLite · React · Tectonic

A FastAPI backend serves the built React dashboard and an embedded SQLite database; pure `requests` + BeautifulSoup scrapers; Tectonic turns LaTeX into PDFs. Any OpenAI-compatible LLM plugs in.

Python 3.12 | FastAPI | SQLite | React 18 + Vite | Docker Compose

Multi-user by design

Each visitor gets an isolated workspace via a cookie session; all heavy work runs through one serial queue with a live “position in line”; visitors bring their own LLM key, so no credentials are shared.

Deterministic first

Deduplication, skill extraction and the base score are plain Python — fast, free and reproducible. The LLM is reserved for judgement: reading CVs, refining top matches, writing documents.

Resilience, learned the hard way

- Self-healing model choice when a provider retires a model mid-request
- Compile-validated documents with fallback to a known-good template
- Rate-limit back-off, response caching, graceful empty states

Four sprints · shipped & documented

From zero to an AI career agent

Sprint 1

Four scrapers, API, dashboard, application tracking — in Docker from day one.

Sprint 2

Skill extraction, deduplication, hybrid scoring, the experience base.

Sprint 3

Full descriptions, CV + cover-letter generation, Apply Assistant, trends.

Sprint 4

Multi-user sessions, work queue, bring-your-own-key, public packaging.

Website, code, deck and a one-command Docker setup — everything a reviewer needs to run it.

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