

CareerCraft: A Smarter, Simpler Workspace for Your Job Search

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Why I Built CareerCraft

Large language models (LLMs) have rapidly transformed the landscape of artificial intelligence and human-computer interaction. From writing assistance to research acceleration, they are becoming integral to both personal and professional workflows. While much of the discussion around LLMs focuses on enterprise-scale applications or public-facing chatbots, their potential for solving highly personal productivity problems is equally profound. CareerCraft is an attempt to harness this potential through a privacy-conscious, locally hosted, AI-powered tool designed to streamline the job search process.

The idea for CareerCraft came from a deeply personal pain point. Currently in my job search, I find myself scattered across multiple systems, spreadsheets for application tracking, documents for interview stories, and websites for resume feedback. This fragmented approach is not only inefficient but also mentally taxing. I wanted a centralized solution that could help me organize, reflect, and improve my job application materials without the friction of constantly switching tools.

While there are tools in the market that offer resume review, interview preparation, or job tracking capabilities, most are either paid services or cloud-based platforms. Using them often requires handing over personal resumes, job descriptions, or sensitive application notes to external servers. In contrast, CareerCraft is built entirely as an on-premise application. It runs locally using a language model hosted via Ollama and provides complete data ownership to the user. This ensures that all career-related content, from resume drafts to personal stories, remains private while still benefiting from the intelligence of a modern model like Llama 3.

CareerCraft integrates three core modules: a Resume Rewriter, a STAR Story Generator, and an Application Tracker. These components work together to form a personal productivity assistant tailored to job seekers. The application is built using Streamlit and demonstrates how LLMs can be incorporated into real-world workflows to solve everyday problems meaningfully and ethically.

How It Works: Inside the Tech Behind CareerCraft

CareerCraft is built as a modular, multi-page web application using Streamlit, where each page maps directly to a specific user workflow: resume rewriting, STAR story generation, and application tracking. The Resume Tool and STAR Generator both rely on a retrieval-augmented generation (RAG) setup that uses FAISS¹ for similarity search and the llama 3: instruct model (8B, quantized) running locally via Ollama for inference. This specific model was selected because it is optimized for instruction-following tasks, performs efficiently on consumer hardware, and excels at generating personalized content such as resumes and behavioral stories. The `resume_examples.json` file acts as the structured knowledge base. In contrast, the Application Tracker uses simple CSV-based persistence for lightweight, no-database job

1. FAISS: Facebook AI Similarity Search, an open-source library for efficient similarity search on dense vectors

logging. This hybrid architecture enables CareerCraft to deliver AI-assisted insights while preserving user privacy through fully local processing.

Resume Rewriter

The Resume Rewriter module is the most technically involved feature in the application. At its core, it implements a simplified RAG pipeline to rewrite or enhance resume content based on a specific job description. The system starts with a curated knowledge base stored in a JSON file that contains strong resume bullet points across multiple roles and domains. Each entry in this dataset is converted into vector embeddings using a local embedding model and stored using FAISS for fast similarity search.

When a user provides their resume and a job description, the system parses the inputs and constructs a query. It then retrieves the most relevant resume examples from the knowledge base and combines them with the user's content to build a context-augmented prompt. This prompt is passed to a llama 3 model running locally via Ollama. The generated output suggests improvements to the resume tailored to the job description and based on high-quality examples. This entire workflow happens locally, ensuring data security while still delivering context-aware suggestions.

STAR Story Generator

The STAR Story Generator module is designed to help users craft effective behavioral interview responses using the Situation-Task-Action-Result (STAR) format. The interface allows users to input stories manually and label them by theme (such as teamwork, leadership, or conflict resolution). These stories are then displayed in the interface for quick reference and can optionally be enhanced using the model by incorporating resume or job description context. This functionality makes the tool especially helpful for practicing behavioral interview responses in a structured and personalized way.

Application Tracker

The Application Tracker serves as a lightweight database for managing job applications. It uses a simple CSV file to persist data such as job title, company name, application source, date applied, current status, and notes. Users can view, update, and delete entries through an interactive interface. Though simple, this tracker provides an essential structure for managing what is often an overwhelming part of the job search process.

All three modules are integrated within a single Streamlit app using its multi-page support. The interface is clean, intuitive, and designed for use on a local machine. No internet connection is required after the initial model setup, reinforcing the privacy-first design philosophy of CareerCraft.

What I Learned and What I Struggled With

Building CareerCraft offered a hands-on opportunity to explore multiple aspects of applied LLM development. It deepened my understanding of how local llama 3 models differ from cloud-hosted APIs in terms of performance, latency, and prompt behavior. Working with Ollama and the llama 3 model (8B parameters, quantized, instruction-tuned) allowed me to experiment with local inference capabilities while

staying entirely within the privacy constraints I had set for myself. The experience also taught me how to manage embeddings and retrieval systems for effective RAG pipelines, which was particularly important in the Resume Rewriter module.

The project also helped me appreciate the user experience and interface design challenges involved in building a real application. Managing state in Streamlit, especially across multiple pages and dynamic elements, required careful structuring of inputs and caching. Building useful prompts that balance structure with flexibility was another key learning area, especially since resume editing and STAR storytelling are highly personalized tasks.

There were several technical and design challenges along the way. One of the main difficulties was optimizing the performance of local inference. Although running llama 3 locally is feasible, prompt length and embedding lookups must be handled carefully to avoid slowdowns. Another issue was data persistence. Because the app is meant to be entirely local, I opted for JSON and CSV files instead of cloud-based databases. This required building lightweight CRUD logic within the Streamlit app itself. Prompt engineering was also a challenge. I experimented with multiple strategies to keep the model outputs relevant and specific without making the responses sound robotic or too generic.

What's Next for CareerCraft

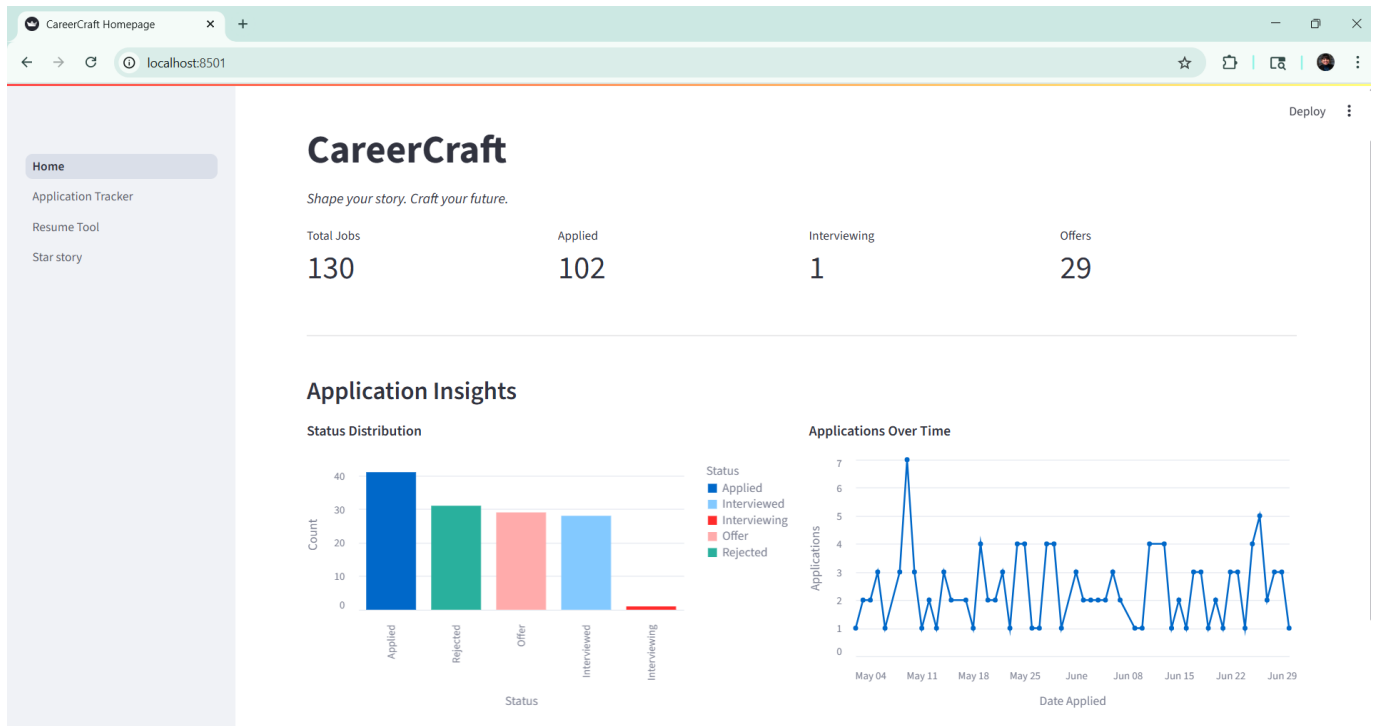
Looking ahead, there are several directions in which CareerCraft could evolve. One obvious extension is cloud deployment with optional authentication. This would allow users to access their job data across devices while still maintaining a strong privacy boundary. Another useful addition would be a more dynamic dashboard view. While CareerCraft already includes an overview page that displays a summary of active applications, enhancing it to show visual summaries of statuses, interview progress, and response rates would provide even greater clarity and insight into the user's job search journey. I also plan to expand the RAG knowledge base with role-specific resume examples and refine the embedding pipeline to use more domain-tuned models. Finally, scraping or importing jobs from platforms like LinkedIn could automate part of the tracking workflow and make the tool even more useful.

CareerCraft is more than just a demo of LLM capabilities. It is a reflection of how AI can be applied meaningfully to personal productivity challenges when built with intention, transparency, and user control. By bringing together local inference, retrieval-based generation, and a practical frontend, CareerCraft empowers job seekers to shape their story and craft their future.

Appendix

Peek into CareerCraft's different pages:

1. Homepage: The landing page that show the overview related to the applications that the user has did till date



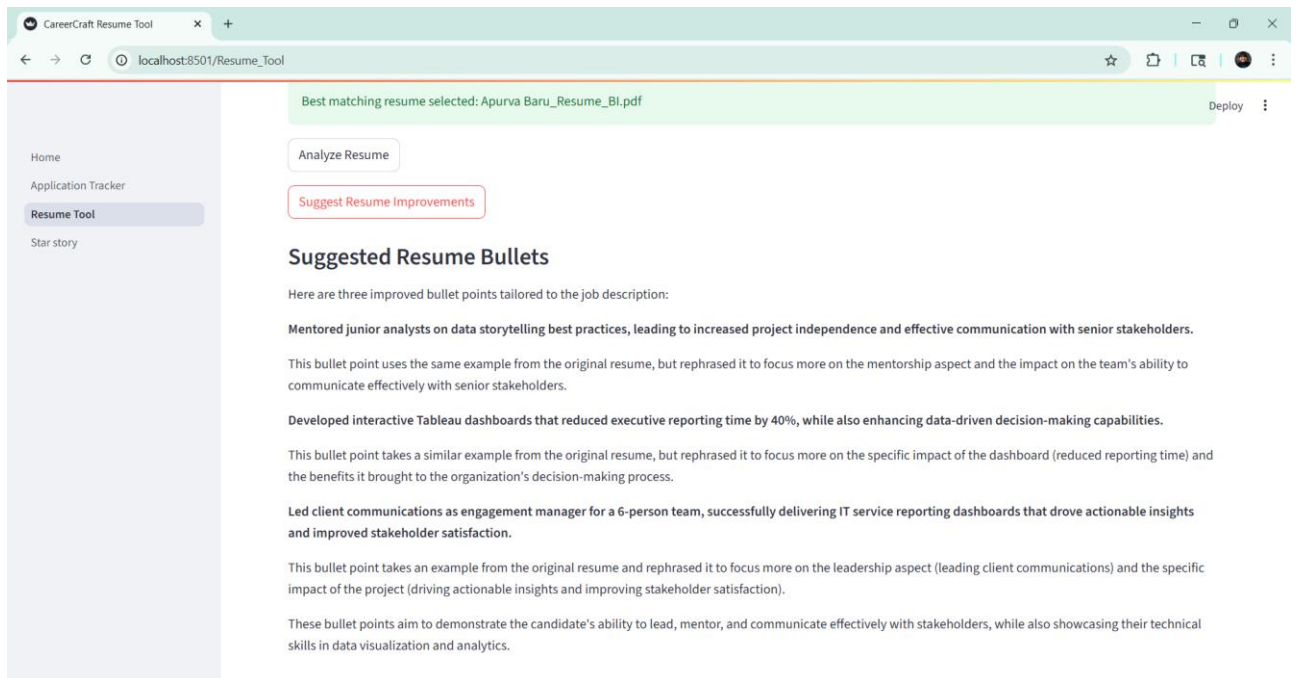
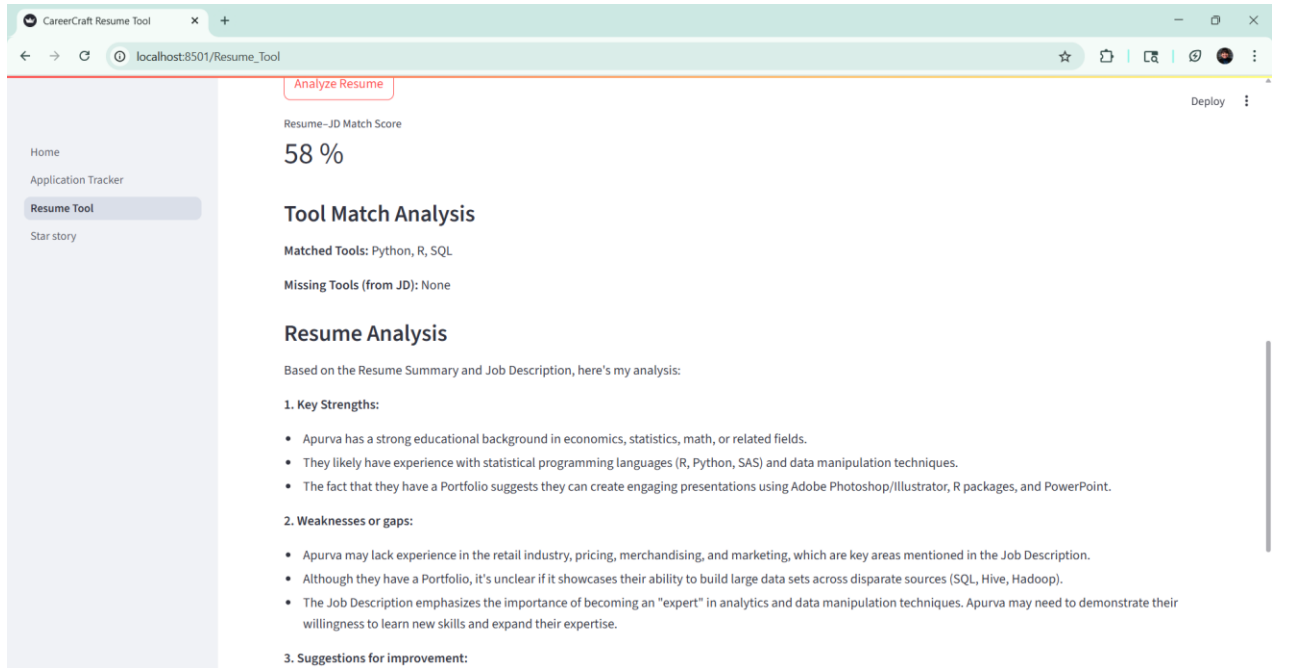
2. Application Tracker: User can add new jobs that they have applied to, update the status of previous jobs and delete the entries if required.

The screenshot shows the 'Application Tracker' web application. The browser address bar indicates the URL is localhost:8501/Application_Tracker. The application has a sidebar with links to Home, Application Tracker (selected), Resume Tool, and Star story. The main content area is titled 'Application Tracker' and features an 'Application History' table. The table has columns for Status, Company, Job Title, Job Type, On-site/Remote, Salary, and Location. It contains 15 rows of application data. To the right of the table are 'Save Changes' and 'Delete Selected' buttons. On the far right, there is a 'Add New Application' form with fields for Status (dropdown), Company, Job Title, Job Type (dropdown), On-site/Remote (dropdown), Salary (optional), and Location.

Status	Company	Job Title	Job Type	On-site/Remote	Salary	Location
Interviewing	Salesforce	BI Developer	Internship	On-site	144511	CA
Interviewed	Netflix	Data Scientist	Full-time	Remote	121750	IL
Applied	Microsoft	Business Analyst	Contract	Hybrid	106258	WA
Interviewed	EY	Data Analyst	Internship	Remote	75207	MA
Applied	Salesforce	Business Analyst	Contract	Remote	124546	TX
Offer	Amazon	Product Analyst	Internship	Remote	77500	MA
Interviewed	PwC	Business Analyst	Internship	Remote	146701	NY
Rejected	Netflix	Product Analyst	Internship	Remote	115054	MA
Interviewed	PwC	Product Analyst	Full-time	Hybrid	124046	CA
Interviewed	Google	Data Analyst	Internship	Hybrid	143510	WA
Rejected	Microsoft	Data Scientist	Internship	On-site	73811	NY
Offer	Microsoft	BI Developer	Contract	Hybrid	103209	NY

3. Resume Tool: Allows the user to match their resume to a job description, suggest changes, highlight strengths and weaknesses, help to choose which is the best resume as per the job description and suggest bullet points that the user can add.

The screenshot shows the 'Resume Tool' web application. The browser address bar indicates the URL is localhost:8501/Resume_Tool. The application has a sidebar with links to Home, Application Tracker, Resume Tool (selected), and Star story. The main content area is titled 'Resume Evaluation & Enhancement'. It includes a 'Choose input method:' section with radio buttons for 'Paste manually' and 'Smart resume picker' (selected). Below this is a 'Paste the job description here' section with a text area containing a job description for a data analyst role. Further down is an 'Upload one or more resume files (PDF only)' section with a 'Drag and drop files here' area, a 'Browse files' button, and a list of uploaded files: 'Apurva Baru_Resume_DA.pdf' (149.9KB) and 'Apurva Baru_Resume_BI.pdf' (211.5KB). At the bottom, a green banner states 'Best matching resume selected: Apurva Baru_Resume_BI.pdf'.



4. Star Story generator: Helps user to generate a structured story based on their experience, role and resume

CareerCraft Star Story Generator

localhost:8501/Star_story

Deploy

Home

Application Tracker

Resume Tool

Star story

STAR Story Generator

Interview question:

Tell me about a time when you had to use your analytical skills to solve a business problem

Your rough story or notes:

This was for my business analytics live case competition. We were working for a Minnesota based non profit organisation who wanted to determine the next warehouse location. They currently had only 1 warehouse where all their food supply was stored; the farmers and the vendors would come to location. Their business model was to support the local farmers, source goods from them in whatever quantity that they can produce, aggregate it at their own warehouse or vendor hub and then deliver it to their customers. They had 5 locations in their mind for the next warehouse location.

The challenge was to identify which factors they should consider to choose one optimal location that would help them serve both their farmers and their customers. This was important as building a warehouse is operationally costly.

Optional: Target job role (e.g., Data Analyst)

Business Intelligence Analyst

Optional: Paste your resume

CareerCraft Star Story Generator

localhost:8501/Star_story

Deploy

Home

Application Tracker

Resume Tool

Star story

Refine into STAR Format

STAR-Formatted Story

Formatted Story

Here's the formatted STAR response:

S: Situation: I was part of a team participating in a business analytics live case competition, where we were tasked with helping a Minnesota-based non-profit organization determine the optimal location for their next warehouse.

T: Task: The challenge was to identify which factors to consider when choosing the next warehouse location, taking into account the organization's mission to maximize their farmer network while serving most customers in a sustainable way.

A: Action:

- * Analyzed datasets from the farmer's network and US census data to identify key factors influencing the decision
- * Created a weighted framework combining distance from candidate locations, farmland available, sales per farmer, and farm size
- * Developed an interactive dashboard using Tableau to visualize and compare metrics for each location