✉️E ColdReach AI

Github repo:
https://github.com/KhawajaAbdullah2000/Gen_AI_Cold_Email_Generator

1. Project Overview

ColdReach AI is an intelligent lead-generation assistant tailored for service-based companies looking to engage with businesses posting job vacancies. It scrapes job listings from a target company's careers page and crafts highly personalized cold emails. These emails reference relevant portfolio links based on the required tech stack, using vector similarity search to match experience with opportunity.
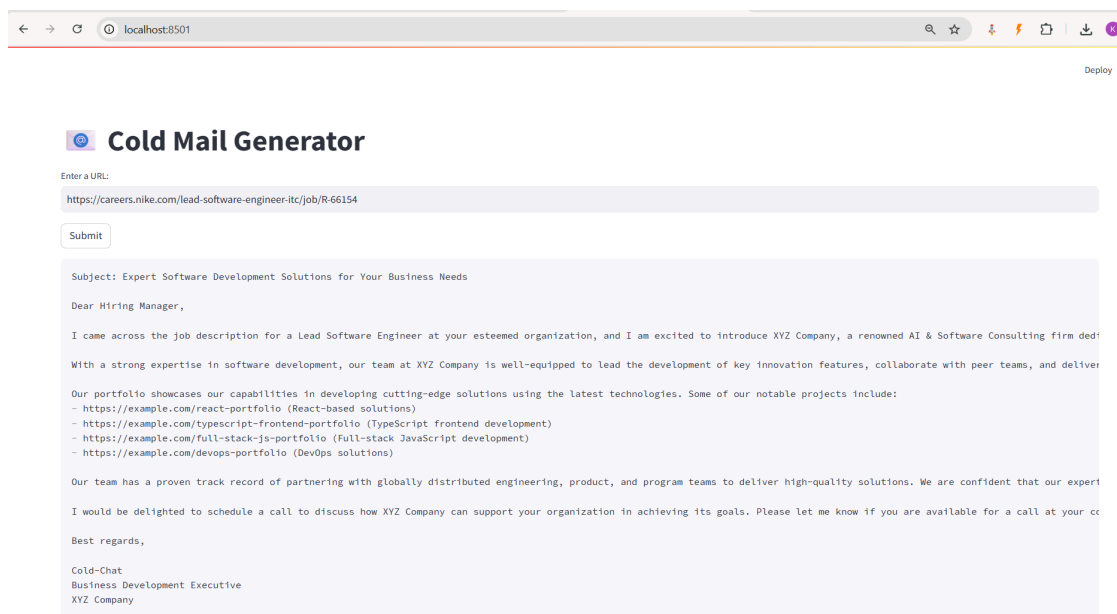

2. Problem It Solves

Traditional cold emails often lack personalization, leading to poor response rates. **ColdReach AI** solves this by:

- Automatically understanding job requirements.
- Dynamically generating tailored outreach emails.
- Attaching matching project/portfolio examples, increasing trust and conversion likelihood.

3. Technology Stack

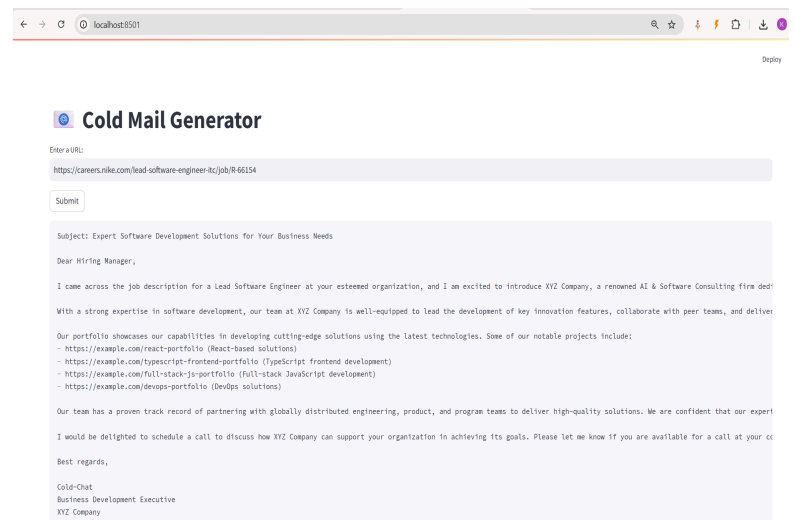| Component	Technology Used
LLM	**Groq (LLaMA 3.3 70B Versatile)**
Web Framework	Streamlit
Prompt Chaining	LangChain
Vector Search Engine	ChromaDB
File/Env Management	dotenv, pandas
Portfolio Storage	CSV + ChromaDB
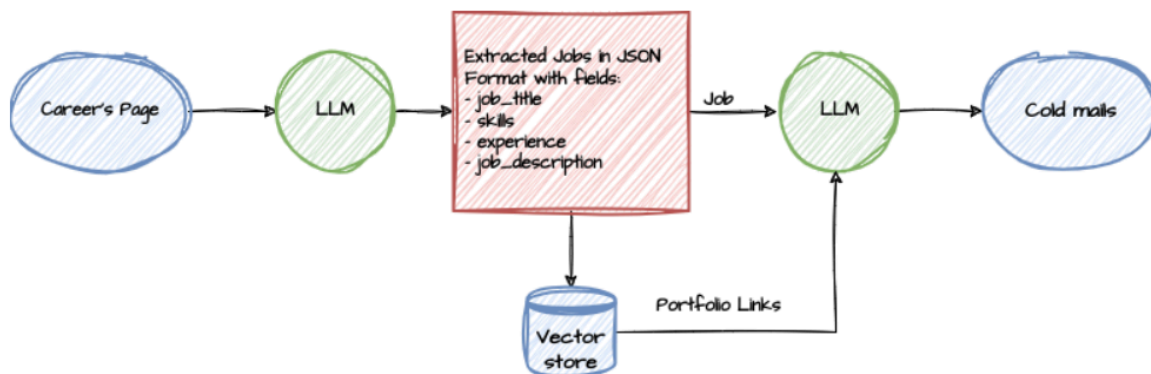
4. Key Features

- 🔗 **Input URL** of any careers page with job postings.

- 🧠 **LLM-Driven Job Extraction**: Uses LLaMA 3.3 via Groq to extract job details like role, skills, and description.

- 📩 **Cold Email Generator**: Auto-writes personalized business outreach emails.

- 🔍 **Vector-Based Matching**: Finds the most relevant case studies from a local portfolio database based on required skills.

- ✅ **Streamlit UI**: Simple web interface for input and output display.

5. How It Works

1. **User inputs URL** of a target company's careers page.

2. The app **scrapes and cleans** the page content.

3. The LLM **extracts job postings** in structured format.

4. For each job:

   - ChromaDB is queried with required skills.

   - **Top 2 relevant portfolio links** are retrieved.

   - The LLM **writes a cold email**, referencing the job and portfolio.

5. Streamlit displays the final email(s) for copying or saving.