Overview of LinkedIn Job Finder API and AI-Powered Job Matching

The **LinkedIn Job Finder API** is a FastAPI-based application designed to **fetch, filter, and recommend LinkedIn job postings** that align closely with user preferences. This system combines **external job scraping** with **AI-based job relevance analysis** to deliver personalized job recommendations.

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1. Job Search and Data Collection

When a user submits their job preferences through the API, the system connects to the **LinkedIn Job Search API** (via RapidAPI) to collect a list of current job postings. The user provides specific search filters such as:

- **Job Title** (e.g., Data Analyst)
- **Experience Level** (e.g., 2-5 years)
- **Expected Salary**
- **Job Nature** (Remote, On-site, Hybrid)
- **Location** (e.g., Toronto)
- **Required Skills** (e.g., Python, SQL)

These filters help narrow down the jobs fetched from LinkedIn, ensuring that only relevant opportunities are pulled for further evaluation.

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2. AI-Powered Job Relevance Analysis

After gathering job data, the system uses **AI (Large Language Model - LLaMA 3.3 70B via Groq)** to **analyze** and **evaluate** how well each job matches the user's preferences. This process includes:

- **Deep analysis of job descriptions** and organizational details.
- **Flexible and intelligent matching** with a focus on **skills alignment** (skills are prioritized over other factors like salary or job nature).
- **Lenient relevance check**: Even if some user preferences are missing in the job posting (e.g., salary not mentioned), the AI still considers it relevant if the skills align.

The AI evaluates each job and returns a **True/False** decision on whether the job is a good match for the user. This enables **automated filtering** of only those jobs that align well with what the user is seeking.

3. Personalized Job Recommendations
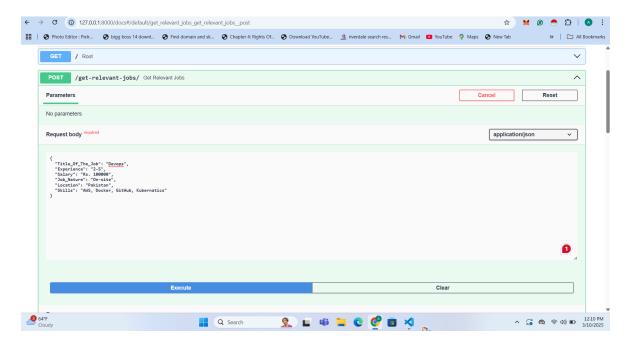
Based on the AI's evaluation:

- Only jobs marked as **relevant** by AI are included in the final output.
- If no suitable jobs are found, the system informs the user accordingly.

The final result is a **list of personalized job recommendations** tailored to the user's profile, helping them avoid irrelevant listings and focus only on the best matches.

Sample

Input

Output:

```
  "Job_Nature": "On-site",
  "Location": "Pakistan",
  "Skills": "AWS, Docker, GitHub, Kubernatics"
}'
```

Request URL

```
http://127.0.0.1:8000/get-relevant-jobs/
```

Server response

Code	Details
200	**Response body**

```
{
  "relevant_jobs": [
    {
      "id": "1463065250",
      "date_posted": "2025-03-10T00:10:21",
      "date_created": "2025-03-10T02:14:08.351137",
      "title": "Devops - (Intern to Job)",
      "organization": "Upvave",
      "organization_url": "https://www.linkedin.com/company/upvave",
      "date_validthrough": "2025-04-09T00:10:21",
      "locations_raw": [
        {
          "@type": "Place",
          "address": {
            "@type": "PostalAddress",
            "addressCountry": "PK",
            "addressLocality": "Lahore",
            "addressRegion": null,
            "streetAddress": null
          },
          "latitude": 31.561918,
          "longitude": 74.348076
        }
      ],
      "location_type": null,
      "location_requirements_raw": null,
      "salary_raw": null,
```

Conclusion

In summary, this LinkedIn Job Finder API **simplifies and personalizes the job search process** by integrating job scraping and AI-based filtering. It ensures users receive **only the most relevant job opportunities** based on their skills and preferences, saving time and improving the chances of finding a suitable role.