So, What Does It Do?

It's pretty neat! This AI system can:

1. **Read Your Blood Test:** It takes your blood test report and figures out what's going on – what's normal, what's a bit high or low, and what that might mean for your health.
2. **Do Some Digging:** Based on your results, it goes online to find reliable articles and info about your specific health needs.
3. **Give You Advice:** Finally, it puts everything together to give you clear, easy-to-follow health tips, like what to eat or how to stay active, and even links to the articles it found so you can read more.

My Approach – How I Built It

Building this was like putting together a dream team. Here's the gist:

- **Understood the Goal:** First, I just focused on what the assignment really wanted to achieve – a system that could analyze, research, and recommend.
- **Picked the Right Tool:** The assignment pointed to `CrewAI`, which is perfect for this kind of team-based AI work. I spent some time learning its ropes.
- **Assembled the Crew:** I realized I needed three main "experts":
    - **The "Analyzer":** This AI's job is just to dissect your blood test report, nothing else. Super focused!
    - **The "Researcher":** This one hits the internet (using a tool called `SerperDevTool`) to find good, trustworthy health articles based on what the Analyzer found.
    - **The "Advisor":** This kind AI takes all the info from the Analyzer and Researcher and crafts practical, friendly advice for you, with links to where it got its facts.
- **Set Up Their Workflow:** I made sure they worked together smoothly, passing information from one to the next in a logical order. The Analyzer goes first, then the Researcher uses that info, and finally, the Advisor gives you the lowdown.

- **Gave Them Their Tools:** The Researcher got access to a web search tool, of course, to do its job.
- **Tested and Tweaked:** Like any good project, I ran it, saw how it did, and then made adjustments. It's all about making sure the advice is helpful and the information is spot-on.

Want to Try It Out?

What You'll Need:

- Python (version 3.9 or newer)
- API keys for OpenAI (for the AI brains) and Serper (for web searches).

How to Get Started:

1. Grab the code.
2. Install a couple of Python libraries: `pip install crewai crewai_tools`.
3. Pop your API keys into your environment variables or directly in the script.
4. Run the script (e.g., `python your_script_name.py`).

What You'll See

Once it runs, you'll get a neat, easy-to-read summary. It'll show you:

- A breakdown of your blood test.
- What research was found.
- And most importantly, your personalized health recommendations with links to learn more!

My Two Cents (Learnings)

- **Asking the Right Questions:** Getting the AI to understand exactly what I wanted was key. It’s all about how you "prompt" it.
- **Teamwork Makes the Dream Work:** Making sure each AI agent passed info correctly to the next was vital.
- **Tools are Power:** Giving the AI the right tools (like web search) makes a huge difference.

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