A Quick Look at Mastra.ai and AI Agents

Principles of Building AI Agents, 2nd Edition, Sam Bhagwat

A Somewhat Quick Intro

During the Agent Hackathon last weekend (Sat, Aug 16) hosted by JustBuild and Redo, I found the demonstration of AI agents going out and crawling the web to be pretty wild. In the demo, the number of instances/agents that went out and searched the web could be increased. Now instead of 1 agent doing the work, now you can run, say 5 agents, in different Chromium browsers to complete the task. A lot of the my interest in AI Agents came from that moment and this entry will document my research and learning on AI Agents with a focus on Mastra.ai.

By no means is this an extensive dive into Agentic AI or the presumably difficult math and logic behind it. I think it serves as more of an eye-opener for me and a starting place to navigate the rapidly changing place.

Lets jump into the book (thank you Mastra!) and learn some cool stuff!

Breakdown

The goal of Mastra is to allow devs to effectively incorporate AI into applications. It's intended to make the use of AI agents as easy as creating a website. The focus of this book is to gain a starting knowledge of AI agents and some of the basic usage of Mastra.

There are levels to AI agents though when it comes to how much autonomy they have. Sam Bhagwat categorizes them into the following:

- Low Level: Binary choices are made in a decision tree by agents
- Mid Level: Memory is stored, a variety of tools can be used, and the agent will also reattempt failed tasks
- High Level: Agents will plan out the task, break it down into smaller tasks and keep track of the tasks in a queue

Mastra and its Functions

In Mastra, the AI agents have memory and have a large number of tools they can connect to autonomously complete a task.

Creating a Basic Agent

```python
import {Agent} from "mastra/core/agent";
import {openai} from "@ai-sdk/openai";

export const myAgent = new Agent ({
  name: "Agent",
  instruction: "Fix my code",
  model: openai("gpt-4o-mini") # model comes from chosen AI SDK,
})
```

```
9
10 # Using the agent
11 const result = await agent.generate('Where is my function findUser?')
```

Getting Structured Ouput

To Be Continued