

Capstone Project

Evaluate and Analyze Outputs

The responses are what you would expect from a modern LLM, they are on topic, accurate, and are relevant and coherent. Changing settings such as temperature will absolutely effect the creativity and accuracy of the responses. Because I decided to create an Agentic AI, I decided to keep the temperature low for simpler and more accurate responses.

Welcome to WeatherMan Weather Assistant! I am an Agentic AI assistant with access to tools that allow me to get live weather for US cities.

14:37

Connecting to weather server...

14:37

Connected! You can now ask weather questions or chat about anything.

14:37

What is the weather like in Seattle?

14:38

Currently in Seattle, it's quite pleasant! The temperature is 76°F with mostly sunny conditions. There's just a light west-southwest wind around 5 mph.

For the next few days:

- Tonight: Partly cloudy with a low of 55°F
- Tuesday: Mostly sunny with a high near 78°F
- Tuesday night: Mostly cloudy with a 40% chance of rain showers after 11pm
- Wednesday: Mostly cloudy with a high near 69°F and a 40% chance of rain

Seattle is enjoying some nice summer weather today, though it looks like some clouds and possible rain are moving in midweek. Is there anything specific about the Seattle weather you'd like to know?

14:38

I'd like to know why cats meow and also the weather in Atlanta.

14:38

Currently in Atlanta, it's quite hot! The temperature is 94°F with sunny conditions and a heat index that feels like 98°F. There's a light southeast wind around 5 mph.

The forecast for Atlanta shows:

- Tonight: Mostly clear with a low around 75°F
- Tuesday: Sunny and even hotter with a high near 99°F and heat index values up to 103°F
- Tuesday night: Mostly clear with a low around 76°F
- Wednesday: Mostly sunny with a high near 97°F and a 30% chance of showers and thunderstorms after 2pm

Atlanta is definitely experiencing summer heat, with temperatures significantly higher than what Seattle is seeing right now. If you're in Atlanta, staying hydrated would be a good idea with those heat index values!

14:38

Okay, thanks! But why do cats meow?

14:40

You're welcome for the Atlanta weather information!

As for why cats meow - cats primarily meow as a way to communicate with humans, not with other cats. Adult cats rarely meow at each other in the wild; they developed this vocalization specifically to interact with people. Kittens meow to their mothers when they're cold, hungry, or scared, but once they mature, cats typically only continue this behavior with humans.

Different meows can mean different things:

- Short meows are usually friendly greetings
- Multiple meows might indicate excitement or greater urgency
- Mid-pitch meows often signal requests for food or attention
- Long, drawn-out meows can express demands or complaints
- Low-pitched meows might indicate unhappiness or preparing to fight
- High-pitched meows can signal pain or distress

Interestingly, research suggests that cats have learned which sounds are most effective at getting human attention and have adapted their vocalizations accordingly. Essentially, they've trained themselves to "talk" to us in ways we respond to!

14:40

Ask about weather or anything else...

Send

Tell me a story about the weather. Make sure to include some references to cats!
15:08

A Weather Tale with Whiskers

Once upon a time in a small coastal town, there lived a tabby cat named Nimbus. Nimbus wasn't an ordinary cat - she had an uncanny ability to sense weather changes before they happened.

On sunny days, Nimbus would stretch out on the windowsill, her orange fur glowing in the warm light. When rain approached, she'd curl up in her favorite basket, purring contentedly as if welcoming the droplets tapping on the roof.

Her owner, Ms. Fletcher, soon noticed this pattern. "Nimbus," she would say, "you're better than my weather app!" And indeed, Nimbus never failed to predict a coming storm, moving to high ground hours before flood warnings were issued.

One autumn day, Nimbus behaved strangely, pacing anxiously by the door and meowing insistently. Ms. Fletcher, having learned to trust her feline meteorologist, checked the weather reports. Sure enough, a significant storm system was approaching.

As the wind picked up and the first heavy raindrops fell, Nimbus settled into her storm position - under the bed, wrapped in her blue blanket. The rain continued through the night, but Nimbus and Ms. Fletcher remained safe and dry.

By morning, the storm had passed, and Nimbus returned to her windowsill, soaking in the rainbow that appeared after the rain, as if taking credit for her accurate forecast.

In that little town, people started saying, "When Nimbus takes shelter, you'd better do the same!" And that's how a small tabby cat became the most trusted weather predictor in the neighborhood.

Would you like to know the actual weather forecast for a specific location? I'd be happy to check that for you!
15:08

Do you think that nimbus is as good at telling the weather as you are?
15:09

Well, Nimbus certainly has some impressive natural instincts! Many cats do seem to have an uncanny ability to sense barometric pressure changes and other weather shifts before humans notice them. Their whiskers are sensitive to air pressure changes, and they can often detect subtle environmental shifts that our technology needs sophisticated sensors to measure.

That said, while Nimbus might be excellent at predicting imminent local weather changes through her behavior, I have some advantages when it comes to comprehensive weather forecasting:

1. I can access real-time meteorological data from weather stations across the globe
2. I can provide specific temperature readings, precipitation chances, and wind speeds
3. I can alert you to weather events hundreds of miles away before they arrive
4. I don't get distracted by laser pointers or catnip!

But I think Nimbus and I would make a great weather team! She could handle the immediate sensory predictions while I provide the detailed forecasts and wider geographic coverage.

Would you like me to actually check the weather forecast for somewhere specific? Or perhaps you'd like to hear more about how animals like Nimbus can sense weather changes?
15:09

Reflect on Limitations

The model performs very well when doing it's intended task of agentically using tools to access weather API's and report the weather. It can get caught up in that and ignore extra instructions at times. Logical reasoning and niche topics will continue to be a problem with LLM's, particularly niche topics as the models need access to a lot of training data to properly deal with something so if that data doesn't exist, then whatever topic it may be may as well not exist to the model.

I am quite proud of my application. I have wanted to experiment with creating an agent for a while as well as creating a Terminal UI so I put quite a bit of effort into this project. To improve on it I would give the agent access to more tools. Things like text to voice so that it can actually talk to you, and maybe some quality of life or productivity tools like the ability to add events to a calendar, ability to search the internet etc. I would also flesh out the back end a little more and have some persistent chat storage which could also be used to provide the agent with some context on the user like their own preferences and workflows. As a software developer I could also add some agentic coding functionality to it. I think that I may use this project as a base to start creating my own agentic personal assistant.