

# 2025 is nearly upon us. Where are all the AI agents?

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## Abstract

Many top tier publications are preaching the benefits of agentic AI, that is, AI which is capable of using tools and performing actions on its user's behalf [1, 2, 3]. However, in the workplace, virtually no agentic workflows are standard practice. This whitepaper intends to explore the reasoning for the gap, break down the attributes of agentic AI, and share best practices for companies looking to get ahead of the curve in 2025.

Finally, the whitepaper releases Scourhead, an open source agentic AI application designed to streamline the research process. This application is released as an example of how simple agentic AI use cases are much easier to deploy and manage in modern enterprises than bracing for a forthcoming-at-some-point artificial general intelligence (AGI).

## Agentic AI

The concept of an intelligent agent drew its roots in academia, but today it lacks a clear singular definition due to marketing teams' mass adoption [4, 5]. Surveying the literature among prominent AI companies reveals several key capabilities [6, 7, 8]:

- The ability to use tools on behalf of the user
- The ability to understand goals versus specific steps
- The ability to execute tasks autonomously or semi/autonomously

## The use of tools

Agentic AI possesses the ability to interact with tools. Where current state-of-the-art AI performs a set task well, there is an integration problem. Most business use cases of ChatGPT involve manually copy/pasting data or building bespoke integrations. Agentic AI differs from the headline AI tools of 2024 in that they are able to perform an action on the user's behalf, not simply providing output to the user. Several examples:

ElevenLabs is an industry leading voice AI tool [9]. In 2024, I [licensed my audiobook narrator's voice](#) and struck a deal where she receives royalties from audiobook sales in foreign languages. Humans translated the text but her AI voice clone was used to synthesize the speech. While this

use case was significant enough to make headlines in 2024, the workflow was heavily dependent on manual input [10]. Despite already having typeset the book for print and ebook, my publishing team had to manually import the text into the ElevenLabs publishing tool. The most frustrating application was paragraphs importing with double line breaks, which synthesized as an unnatural pause. Each paragraph had to be manually corrected. Once the output was generated, we had dozens of individual audio files and had to organize into the format to upload to publish on Spotify. This is but one example of how the AI is powerful, but the lack of integration with other tools presents a hindrance to further adoption. This discrepancy is particularly prescient as many AI companies present the value proposition of their product as saving time.

The Spanish bank BBVA launched an AI pilot program involving purchasing 3,000 ChatGPT licenses for various employees in 2024. Though the pilot was deemed successful, six months in one of the main issues flagged was the lack of integration with existing business systems [11].

The AI startup Artisan pitched their email and dialer software as a virtual sales representative, down to anthropomorphism in marketing materials and a bold slogan to “stop hiring humans” [12]. While there is value in streamlining the more tedious aspects of sales workflows, the company faces criticism for coming across as tone deaf and anti-human [13]. In my view, true agentic AI magnifies the latent abilities of what a human can do. It allows us to explore whitespace that we’re currently not exploring, and we don’t have to view the body of work to be done as zero sum.

Synthesia is an AI avatar provider, showing promise among customer success teams due to the ability to create virtual avatars and greatly simplify the overhead required to create high quality training videos [14]. However, upon signing up for the tool, a new user is faced with a blank canvas and is expected to enter in the details of the script. While the tool is certainly powerful and saves time even without these integrations, the lack of context of the company’s products, context, and existing documentation puts the burden on the user to plug the gap.

A top feature request heard by my startup Yembo’s product team in 2024 was requests for integrations with more tools in insurance and moving companies’ supply chains, to avoid double data entry inefficiencies.

## From Do-It-Yourself to Do-It-For-You

Agentic AI is capable of taking a high-level goal from the user, as opposed to specific tasks that must be done [15]. Consider most business applications from the last decade: Quickbooks, TurboTax, Salesforce, Google Workspace, Office 365, to name a few. All of them, for example, have robust and feature-rich administrative reporting capabilities. They are so rich, in fact, that a major complaint among customers today is that there are too many features that deployment is difficult [16]. Faced with a business objective and a timeline, it is cumbersome to find the right report that satisfies the requirements of the task. It’s important to note that these complaints are not against

these named tools in particular, but rather against the business news productivity software industry in general.

Alternatively, consider a financial tracking application where one could query in natural language. Just as a manager might ask a subordinate, an analyst could ask “how is our spending tracking against our goals?” or “What business objectives are most at risk currently?” Agentic AI understands these higher level business concepts and is capable of suggesting or outright implementing a strategy to address the need. This addresses a genuine problem in business productivity software today where consumers generally feel there are too many tools and too much sprawl.

Steve Jobs famously said the computer is like a bicycle for your mind [17]. A bicycle can't do much without a rider. But now the agents can do useful work on our behalf, even when we're sleeping.

## Focusing expectations

With the nonstop discourse in tech circles of AGI just being around the corner, it can be quite paralyzing to a CIO tasked with fiscal year 2025 purchasing decisions. Is the fundamental nature of work about to change? Should we invest in AI tools today and risk missing out on the next big thing around the corner? Should we wait it out or fast-follow if a competitor makes waves?

Agentic AI need not be complex. AGI is a complex problem with multiple layers of nuance and differences of opinion on what it means. Some researchers say it is 10 years or more out [18]. Others say we're not even on a trajectory to get there ever without future fundamental breakthroughs in science [19]. Still others believe it's already here [20]. All these arguments have merit. What's a responsible business leader to do?

The shrewd leader will see this debate about AGI as a false dilemma. Perhaps it makes for interesting dinnertime conversation, but it's important to remember that AI is still software. Powerful and exciting software, but still software.

And when it comes to budgeting, forecasting, and planning, viewing it as software has multiple illuminating effects. Firstly, if it costs money (which AI tools are known to do, due to substantial compute costs required to implement AI algorithms), it should be treated as a valuable investment given its capabilities.

Rather than waiting for AGI, shrewd leaders can identify the core AI use cases the company stands to benefit the most from implementing, and investing the infrastructure and integration time to make those workflows work seamlessly. Agentic AI can help ease the burden here but the overall insight is to focus on the workflow that the AI is getting plugged into rather than the AI itself.

What is the business objective being magnified? Who will the stakeholders be? Who will handle exceptions? What are your organization's expectations for success? After all, we all have business to tend to, and while AGI might (or might not) change things tomorrow, or in 10 years, or never, the prudent thing to do is to focus on how to best set 2025 plans based on 2025 capabilities.

You wouldn't buy a spreadsheet app or an email client based on expectations of what it might do 10 years down the road. You'd buy it based on how it solves your needs today.

If you could use some help framing your business goals in 2025 to make the most of the technology that's available today, feel free to reach out. Our AI Conversation Starter series consists of questions we have used at Yembo to oversee over 1,000 AI deployments at serious companies large and small, domestic and international. We can help you get the right framework in place before you start implementing.

## How to get started?

If the pundits are to be believed, 2025 is the year of agentic AI. So why are there not more agentic applications in use? Have they just not come yet? Is it all hype?

To kick off the new year, I'm pleased to announce Scourhead, my first agentic AI application that I am releasing for free today.

- Researching the web can take a long time. Whether you're a sales representative searching for leads for your company, a product manager scoping out the competitive landscape, or a founder looking to enter a new market, the workflow is fairly similar (and quite tedious):
- Decide what you're looking for. Come up with Google queries to search
- Decide what you want. Open up a spreadsheet, enter in the columns, and fill in as you search
- Rinse and repeat until you are satisfied you have enough information. If you're lucky, maybe you get help from someone else.

Scourhead blends the latest AI models with the latest software tools to automate this framework. Here's how you use it:

1. Tell it your objective. It comes up with search queries for you. You can still review and edit the list, but it does that initial brainstorming work for you
2. Tell it what fields you are interested in retrieving, and any specifics you'd like about the format.
3. It searches each query, clicking into the first few pages of results
4. It visits each page, checks if it's relevant to your objective, and extracts the information you requested from the page
5. It gives you the spreadsheet with the data and the links back to the source pages

## The technical details

- There is no backend server to Scourhead. This means there is no home base to share data into. I don't know what your queries are and I've architected the system to demonstrate how powerful your apps can be without a backend. The start of this show is you and your mighty laptop, not me and my cloud backend.
- The app depends on the Ollama framework to run large language models locally on your device [21]. The app uses Meta's Llama 3.2 (3B) model which balances performance and speed for most consumer grade devices [22]. You don't need a super expensive GPU to have the app work well
- Kudos to Ollama for the structured output feature. It's ridiculously useful.
- Browser automation is achieved through Microsoft's Playwright a popular tool that lets web pages be controlled through software [23]
- If you'd like more details, check out [Scourhead on GitHub](#)

## Some parting encouragement

Change can be difficult. In terms of how the nature of daily life is changing, the pace of innovation in the last few years alone has surpassed several centuries in the Middle Ages. I have seen this reluctance to change firsthand working with clients in the moving and insurance industries, some of which have been in business for over a century. And it's a reasonable objection. If this new technology hasn't withstood the test of time yet, who's to say it's here to stay?

While I can't predict the future, looking back, I can see similarities to personal computers in the 80s, the Internet in the 90s, Web 2.0 in the 2000s, and mobile in the 2010s. And in any of those decades, I wouldn't want to have bet against those upcoming technologies. The companies that benefitted were not just the creators of the technology, but the business that adapted it early and used it to their competitive advantage. AI is perhaps more powerful than these predecessors because it builds on all of them. It's certainly an exciting time to be alive.

On the topic of predictions, I do hope 2025 is the year we leave our laptops open when we finish work for the day. We shut the lid to our laptops at the end of the work day, nothing gets done until we open them again the next time we're back to work. Warren Buffett told us to figure out how to make money when we're sleeping. If AI agents will let us leave our laptops open overnight, we'll be able to get more done without doing anything.

# References

- [1] PricewaterhouseCoopers, "Agentic AI – the new frontier in GenAI," PwC, 2024. <https://www.pwc.com/m1/en/publications/agentic-ai-the-new-frontier-in-genai.html> (accessed Dec. 28, 2024).
- [2] K. Robison, "Agents are the future AI companies promise – and desperately need," *The Verge*, Oct. 10, 2024. <https://www.theverge.com/2024/10/10/24266333/ai-agents-assistants-openai-google-deepmind-bots>
- [3] K. Wiggers, "This Week in AI: The AI agents cometh | TechCrunch," *TechCrunch*, Oct. 23, 2024. <https://techcrunch.com/2024/10/23/this-week-in-ai-the-ai-agents-cometh> (accessed Dec. 28, 2024).
- [4] N. R. Jennings, K. Sycara, and M. Wooldridge, "A Roadmap of Agent Research and Development," *Autonomous Agents and Multi-Agent Systems*, vol. 1, no. 1, pp. 7–38, 1998, doi: <https://doi.org/10.1023/a:1010090405266>.
- [5] P. Stone and M. Veloso, "Multiagent Systems: A Survey from a Machine Learning Perspective," *Autonomous Robots*, vol. 8, no. 3, pp. 345–383, 2000, doi: <https://doi.org/10.1023/a:1008942012299>.
- [6] Sundar Pichai, "Introducing Gemini 2.0: our new AI model for the agentic era," *Google*, Dec. 11, 2024. <https://blog.google/technology/google-deepmind/google-gemini-ai-update-december-2024/>
- [7] "Building effective agents," *Anthropic.com*, 2024. <https://www.anthropic.com/research/building-effective-agents>
- [8] "Altera uses GPT-4o to build a new area of human collaboration," *Openai.com*, 2023. <https://openai.com/index/altera/> (accessed Dec. 28, 2024).
- [9] *Elevenlabs.io*, 2023. <https://elevenlabs.io>
- [10] R. Popescu, "AI-narrated books are here. Are humans out of a job? This San Diego startup has a solution.," *San Diego Union-Tribune*, Mar. 07, 2024. <https://www.sandiegouniontribune.com/2024/03/07/ai-narrated-books-are-here-are-humans-out-of-a-job-this-san-diego-startup-has-a-solution/> (accessed Dec. 28, 2024).
- [11] M. Kaput, "Enterprise Adoption of ChatGPT: How It's Actually Going," *Marketingaiinstitute.com*, Dec. 03, 2024. <https://www.marketingaiinstitute.com/blog/enterprise-adoption-chatgpt-ai> (accessed Dec. 28, 2024).
- [12] "Hire Ava, the AI SDR | the Best AI Sales Agent," *Artisan.co*, 2024. <https://www.artisan.co/ai-sales-agent> (accessed Dec. 28, 2024).
- [13] F. Landymore, "Humans Alarmed at AI Company's 'Stop Hiring Humans' Billboards," *Futurism*, Dec. 16, 2024. <https://futurism.com/the-byte/stop-hiring-humans-ad> (accessed Dec. 28, 2024).
- [14] "Synthesia - AI Video generation platform," *www.synthesia.io*. <https://www.synthesia.io>

- [15] T. Iftikhar, "Agentic AI," *Growthloop.com*, Dec. 20, 2024.  
<https://www.growthloop.com/university/article/agentic-ai> (accessed Dec. 28, 2024).
- [16] Block 64, "The Hidden Costs & Risks of Unmanaged SaaS Sprawl - Block 64," *Block 64* -, Nov. 12, 2024.  
<https://block64.com/it-asset-management/the-hidden-costs-of-saas-sprawl-gartner/> (accessed Dec. 28, 2024).
- [17] "Steve Jobs, 'Computers are like a bicycle for our minds.' - Michael Lawrence Films," *www.youtube.com*.  
[https://www.youtube.com/watch?v=ob\\_GX50Za6c](https://www.youtube.com/watch?v=ob_GX50Za6c)
- [18] "Human-level AI still a decade away, Meta scientist warns | Digital Watch Observatory," *Digital Watch Observatory*, Oct. 17, 2024.  
<https://dig.watch/updates/human-level-ai-still-a-decade-away-meta-scientist-warns> (accessed Dec. 28, 2024).
- [19] Professor Eerke Boiten, "Does current AI represent a dead end?," *Bcs.org*, Nov. 06, 2024.  
<https://www.bcs.org/articles-opinion-and-research/does-current-ai-represent-a-dead-end/> (accessed Dec. 28, 2024).
- [20] Noor Al-Sibai, "OpenAI Employee Says They've 'Already Achieved AGI,'" *Futurism*, Dec. 07, 2024.  
<https://futurism.com/openai-employee-claims-agi> (accessed Dec. 28, 2024).
- [21] "Ollama," *ollama.com*. <https://ollama.com/>
- [22] "Llama 3.2 | Model Cards and Prompt formats," *Llama.com*, 2022.  
[https://www.llama.com/docs/model-cards-and-prompt-formats/llama3\\_2/](https://www.llama.com/docs/model-cards-and-prompt-formats/llama3_2/) (accessed Dec. 28, 2024).
- [23] "Fast and reliable end-to-end testing for modern web apps | Playwright," *playwright.dev*.  
<https://playwright.dev>