Agentic AI: Powering Tangible Business Outcomes using Gen AI

99x Technology

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The state of AI today

Generative Artificial Intelligence (Gen AI such as ChatGPT) has undergone a remarkable transformation over the past few years, evolving from simple prompt systems to sophisticated multi-agent workflows that can autonomously drive business outcomes. There are three categories of Gen AI systems we can commonly see in business.

Creative AI

The significant leap in AI was the advent of generative AI, which could create content, generate text content, and even produce art. Early generative AI models, such as GPT-3, brought a new level of sophistication to AI applications by enabling machines to understand and generate human-like text. This capability opened new possibilities for a variety of content creation, such as images, music and more.

Chatbots

The journey of new Gen AI applications began with chatbots, which were designed to simulate human conversation. Early chatbots were limited to predefined scripts and could handle only conversations. However, they laid the foundation for more advanced AI systems by demonstrating the potential of automated customer interactions via integrating with Backoffice systems.

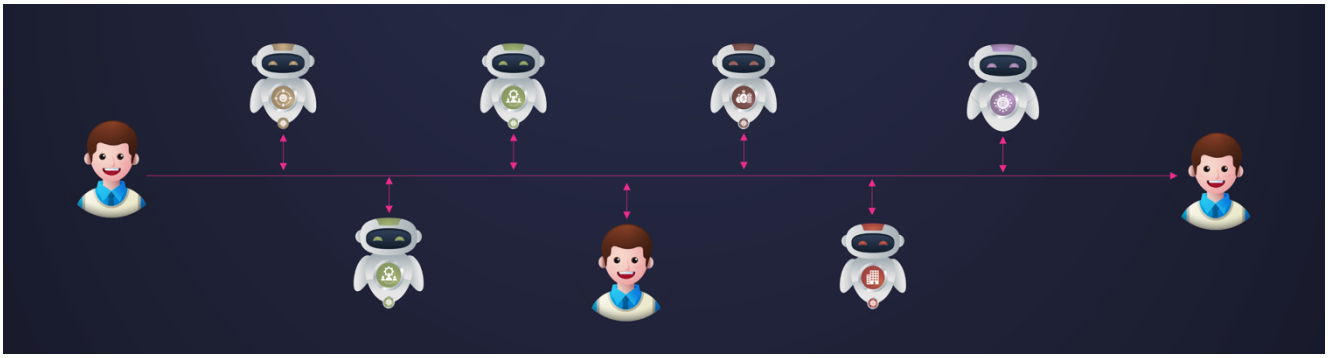
Agentic AI

Agentic AI represents the current frontier of AI evolution. Unlike traditional AI systems that operate in isolation, agentic AI involves multiple AI agents working collaboratively to achieve complex tasks. These agents can communicate, negotiate, and make decisions autonomously, involve humans in the process where needed, leading to more efficient and effective workflows.

By leveraging AI for good, companies can achieve better outcomes while also contributing to societal well-being.

Use cases for Agentic AI

AI has proven to be a powerful tool for improving productivity, safety, and efficiency across various industries. From automating repetitive tasks to enhancing decision-making processes, AI is driving significant advancements in how businesses operate. Let's look at two use cases from different domains, in marketing and sales, and in software development.



Team of Agents (Auto-Pilot)

Marketing and Sales – prospect identification and qualification

One of the most impactful applications of multi-agent AI workflows is in prospecting and lead generation. Let's explore how this would work.

→ **Identification of prospects based on given criteria and data sources:** AI agents can be programmed to identify potential prospects based on specific criteria, such as industry, company size, and recent news. These agents can read data from various sources, including news sites and job boards, to gather relevant information.

→ **The AI agent reads these sites and checks against qualifying criteria:** Once the data is collected, another AI agent can analyze it against predefined qualifying criteria. This ensures that only the most promising prospects are considered for further evaluation.

→ **The AI agent prepares a report of insights:** The AI agent then compiles a comprehensive report, drawing insights from multiple online sources. This report includes details on the prospect's size, financial performance, recent news, and leadership.

→ **Get the 'Human in the Loop' to validate:** Finally, the report is reviewed by a human team member who decides the next steps. This collaborative approach ensures that AI agents handle the heavy lifting (or the grunt work!), while humans provide the necessary oversight and strategic direction.

Software development – Code fitness test

Another compelling use case for multi-agent AI workflows is in software development, specifically in ensuring code quality and compliance with coding standards.

→ **The developer submits a new feature with code changes:** When a developer submits a feature (pull request - PR) with new code changes, it triggers an AI-driven workflow.

→ **This initiates an AI agent that reviews the code:** An AI agent reviews the new code against established coding standards, identifying any violations or areas for improvement.

→ **The AI agent creates an independent PR for any improvements:** If the AI agent detects issues, it can independently create a new pull request with proposed changes to address the identified problems.

→ **The developer (human in the loop) can review and accept the proposed changes:** The developer then reviews the AI-generated pull request and decides whether to accept the proposed changes. This process ensures that code quality is maintained while reducing the manual effort required for code reviews.

How 99x's journey in building AI agents evolved

99x, a technology services company, has been at the forefront of developing AI agents to drive business outcomes. Our AI journey can be broken down into several stages:

→ **User-invoked AI such as Chatbots and Co-Pilots**

Initially, we focused on user-invoked AI solutions like chatbots and co-pilots. While these tools were helpful, they were largely manual and couldn't easily transition to automated workflows.

→ **Workflow automation using tools**

Next, we explored workflow automation using tools like Zapier and Power Automate. These tools were effective for demonstrating 'sunny day' outcomes but were limited in their AI capabilities and struggled when handling edge cases.

→ **Workflow Automation Using Scripts**

To address these limitations, we experimented with workflow automation using scripts and platforms like Relevance AI. However, the instructions required to handle real-world scenarios became too verbose resulting in the solution becoming too complex. In addition, the platforms lacked enterprise-grade stability and performance.

→ **Generative Orchestration**

We then moved towards generative orchestration, using co-pilot studios to achieve specific outcomes. While this approach offered greater flexibility, it was challenging to balance autonomy and control.

→ **The need to build Xians.ai**

To overcome these challenges, we built our own platform, www.Xians.ai. This platform was designed to overcome the limitations of the previous approaches while providing a robust solution for multi-agent AI workflows.

Key functionalities of the Xians.ai platform

The Xians.ai platform offers several key functionalities that make it a powerful tool for orchestrating AI agents.

→ **Flexibility to orchestrate AI agents**

Xians.ai allows for the orchestration of AI agents to run autonomously or in a 'human in the loop' mode with minimal switching effort. This flexibility ensures that businesses can choose the level of automation that best suits their needs.

→ **AI native platform**

Being AI native, Xians.ai enables agents to benefit from natural language processing and understanding intent. This inherent capability allows for more intuitive and effective interactions between AI agents and human users.

→ **Power of programming languages**

The platform provides the power of programming languages to detail specific steps or workflows. This capability ensures that businesses can create highly customized and precise workflows to meet their unique requirements.

→ **Control over processes**

AI is inherently probabilistic- which can be a challenge in having consistent outcomes repeatedly. To balance this, Xians.ai offers control over processes by allowing developers to specify deterministic workflows and work instructions to agents. This ensures that AI agents operate within defined parameters and deliver consistent results.

→ **Production-grade platform**

The platform is designed to be production-grade, offering fault-tolerance, scalability, persistence, and other essential features required for real-life applications. This ensures that businesses can rely on Xians.ai for mission-critical workflows.

Conclusion

Our journey in building AI agents has been marked by continuous innovation and learning. By exploring various tools and approaches, we have developed a deep understanding of what works and what doesn't work in the realm of AI-driven workflows.

We have discovered many tools and technical approaches that are sub-optimal, but these experiences have been invaluable in shaping our current incarnation of Agentic AI. The use-cases shared in this article demonstrate that our AI solutions are not just theoretical concepts but are able to deliver measurable business-value in production scenarios.

In conclusion, multi-agent AI workflows represent a significant advancement in the field of AI, offering businesses the ability to automate complex tasks, improve efficiency, and drive better outcomes. With platforms like www.xians.ai, companies can harness the full potential of AI to achieve their strategic goals and stay ahead in an increasingly competitive landscape.

The Gen AI transformation

Generative AI is transforming how we interact with technology, offering new possibilities to address suboptimal user interaction patterns that have persisted for years. By implementing Gen AI solutions, product designers and developers can enhance usability, streamline workflows, and reduce the friction associated with common interaction patterns. From automated content generation to intuitive data categorization, Gen AI provides the foundation for a new era of intelligent, user-centered design, where complexity is replaced with intuition.

As Gen AI continues to evolve, its potential to simplify complex tasks and improve the overall user experience will only grow, making it an indispensable tool for modernizing product design and interaction patterns.