

AI Assistants and Simulations

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INTRODUCTION

I had sat through three or four different presentations about AI for Senior Executives / Board of Directors and came away convinced that AI was a glorified search engine that often gets it wrong. But that couldn't be true. People were reportedly investing hundreds of billions of dollars into AI. You heard that right, hundreds of billions. I finally decided to try it myself. Around the time I started using ChatGPT in early 2024, OpenAI brought out CustomGPTs. I tried those and it felt like the scene in the movie *Avatar* when Jake Scully took his first flight on the back of the banshee. I was able to direct the Large Language Model (LLM) like never before and I started to learn about what seemed to be amazing emergent capabilities.

On first look, these AI assistants seem too simple to be worth much. All they do is provide the capability to save instructions - a universal prompt that applies every time the assistant is used. And you can also save files with data that is available every time the assistant is used. Different platforms add in different additional capabilities, but those two features are the most important and are common to all platforms that support assistants. The AI assistants are called CustomGPT on ChatGPT, Gems on Gemini, Projects on Claude and Bots on Poe.

But just adding those two capabilities opens a world of possibilities. Things that I found helpful to do with AI become easily repeatable. And as an old programmer, I immediately started creating a series of AI assistants that I think of as small programs.

Here are three examples of AI assistants that I have written and used:

PromptCompleter - If you have tried to learn best practices for prompting, you will have noticed an annoyingly long list of issues that you are told to address in every prompt. This assistant adds my usual entries for those issues.

InsDigitalStratgyBot - Assists insurance companies in developing and refining their digital strategies. It provides tailored advice based on specific company data or offers generic recommendations for the insurance industry at large.

AIProblemSim - Provides a business situation in which an actuary can play the role of a Chief Actuary who must work with another senior officer to develop a solution to a new company problem, practicing communication and persuasion. More on Sims to follow.

These AI assistants are built using several different types of prompts. In addition, some rely on specific additional data, usually stored in a file.

The most amazing example of an AI assistant that I have created is InsStrategyBot. It consists of a very simple prompt “Answer questions about Insurance Company Strategy using the information in your knowledge base.” The knowledge base is the name for the files that the developer provides. In this case, those files were extracts of a dozen insurer annual reports. The AI assistant gives responses to strategy questions that consist of seven or eight bullet points that are real life examples found in the Management Discussion and Analysis. Not a dissertation, but it is a great start for doing some competitor research. It was this single shot AI assistant that was the lightbulb moment for me about the power of these tools.

Let’s go back to those three examples now and explain how they create their effects.

PromptCompleter is a single shot prompt. It asks you for the subject of your query. It has a system prompt built in that defines a particular type of situation in terms of the reason for the question, the audience, the format and the style. For example, you could create an AI assistant like this to produce material for your boss with a consistent look and feel.

The InsDigitalStratgyBot is a chained prompt that allows input of one or more files that describe the company’s current digital strategy. It uses a multi-shot approach to allow the user to approve the assistant’s suggestion for different aspects of digital strategy as it is being developed, rather than all at once after the entire response has been developed.

The AIProblemSim uses the Simulated Dialog type prompt with multiple characters being defined for different stages of the simulation, including an evaluation step with a defined coach providing feedback. There is a defined problem that the user would be working on with a simulated counterpart that might be a help or a hindrance. This allows the user to practice different types of situations that they are likely to encounter on the job and get targeted feedback on their performance - all in private.

Once you get used to assembling these AI assistants, they become as second nature as spreadsheets. I have averaged creating close to two new assistants per week. Think about it, do you have any idea how many spreadsheets you made in the past year? You could become that blase about AI assistants. And those assistants could become just as vital to your workflow.

I have since gone several additional directions with my AI assistants. As a risk management actuary, scenarios are very important to my work and I found that an AI assistant can be very helpful with creating detailed descriptions of scenarios that can be used for stress testing or for planning, based upon relatively lean specifications. I have also created an AI assistant that will tell me how to attack a problem using a variety of thinking styles that can result in very different conclusions. And recently, I took the Evaluation idea to the next level, creating an AI assistant with four different personas who are instructed to criticize my work. The toughest of the four is an avatar of me!

AI assistants have catapulted me from feeling threatened by obsolescence to running with the leaders of the pack. And all of this was done in plain English!

SIMULATIONS

Most recently, I have been concentrating on the development of simulations. I first encountered a simulation of sorts in the late 1970’s with the program ELIZA adapted by Jeff Schragger from the original version written in the 1960’s by Joseph Weizenbaum. ELIZA was programmed to respond like a Rogerian Psychologist by repeating some form of what you said back to you as a question. Many people today are using LLMs similarly as a virtual therapist.

We have all had the experience of walking away from a situation and realizing that there is something better that we should have said. I imagined using simulations to help practice for those important occasions so that maybe we will know just what to say in the moment instead of in the hallway on the way home.

When you are prompting an LLM, it is standard to start the prompt by telling AI that it is an expert at whatever topic you are planning to ask it about, telling the LLM to play a role. I read that it was possible to combine the role playing with a scenario and, thereby, have AI support a simulation. With that hint, I was off to the races using AI assistant technology to build customized business simulations where actuaries and Chief Risk Officers were the characters, and their quest was to save the company from some calamity.

In these business simulations, our hero (the user) is usually given a problem to resolve, who is then joined either by an assistant or another person who acts as an obstacle or helper and then continues down their path to glory. In my simulations, the hero is usually met by a wise person at the end of the story who will help the hero to understand how well they performed on their journey.

The purpose of these simulations is to give the user exposure to new situations or practice their communication skills with different audiences. Imagine stepping into the shoes of a Chief Actuary during a crisis where immediate and strategic responses are critical. Or, perhaps a major reinsurer that your company relies on is rumored to be in financial trouble, and senior leadership urgently seeks your guidance as the CRO.

In another scenario, imagine being tasked by the Board with a comprehensive refresh of your company's risk appetite statement, managing diverse and potentially conflicting views. Or stepping into the role of a Chief Actuary faced with evaluating an innovative insurance product that promises growth but brings uncharted risks. You could even find yourself advising executive leadership on the strategic use of surplus capital, weighing risk-adjusted returns across various growth proposals.

Depending on the simulation's goals, your interactions might vary dramatically. You might encounter a supervisor whose managerial style is direct and results-oriented but who tends to be overly critical. You could be paired with someone whose relentless questioning—though eager and well-intended—might feel overwhelming. Perhaps you'd work alongside a forward-thinking actuary who leverages technology creatively to solve complex problems. Or you might face off with a sharp, outspoken contrarian who consistently challenges group consensus to maintain intellectual rigor.

As the simulation concludes, you'll typically receive insightful feedback from notable figures whose styles are instantly recognizable, adding authenticity to the experience. Imagine receiving guidance from someone who embodies Jack Welch's decisive leadership, the strategic insights of Indra Nooyi, or the innovative perspective of Steve Jobs.

The feedback itself targets key competencies you wish to enhance. You could focus on improving clarity and precision, ensuring logical flow, or deepening your argument's completeness and relevance. Perhaps technical accuracy is critical for your scenario, or you might seek to sharpen your call-to-action skills. Adaptability, prioritization, and leadership styles might be assessed, along with your ability to navigate regulatory environments or communicate persuasively across cultures.

USER REACTIONS

These sims have been presented at several actuarial webcasts and beta tested by risk management folks at three companies. I was able to collect reactions from a dozen users. Overall, they found the sims to be engaging, realistic, challenging and providing welcome feedback. Here is more information about their reactions.

Users found the simulation to be more engaging and "super fun" compared to traditional, often "very boring" compliance training that involves being "spoken to" and then taking a knowledge check. The interactive nature of the tool, which requires users to "think rather than just read," was seen as a key benefit. The simulations were considered a "worthwhile exercise" and a "good thing" for practicing soft skills like communication and critical thinking that cannot be learned from a book.

Users appreciated that the simulation felt lifelike and presented "complex situations" and "strong personalities." One participant noted that the character "Julian" was actually a bit easier to deal with than their company's real chief legal officer. Several of the participants talked about Julian almost as if he were a person. The sim helped one user to stay mindful of their audience, anticipating questions, tailoring their responses and communication style to the background, focus, and areas of interest of their target audience.

The tool was seen as a way to prepare for difficult conversations and handle different personalities on the spot, brushing up skill sets for people on a risk team. One user felt the simulation was designed to "teach how to be a strategic leader in a crisis." The experience of replaying a work situation in one's head and wishing for a different outcome was directly addressed by the simulation, providing an opportunity to practice different approaches.

The feedback provided at the end of the simulation was consistently viewed as "good," "helpful," and "worthwhile." One user, after receiving a "C minus, D plus grade," learned that they needed to "ask more questions" and interact with the simulation as if it were a real person to get the most value out of it.

The feedback helped users identify areas for improvement, such as being "more assertive" and "pushing for a more transparent and comprehensive assessment of risk." The ability to remember the feedback and apply it to future in-person or on-the-phone situations was highlighted as a key benefit.

Some users found the simulation challenging and even frustrating at times, with one noting that the AI character could be "bull headed." Users felt that there wasn't always enough time to prepare a list of arguments, and they might need more time to think about their answers.

One user was confused about what to do at the beginning of the simulation because the instructions mentioned that a report would be presented, but it never was. This led to a suggestion for clearer instructions at the start of the simulation, such as telling the user to ask for the report. Other users simply asked for the report and got it. A point of frustration was the possibility of not making any headway with a difficult character, which could encourage users to give up. But that was a realistic situation.

A suggestion for improvement was to provide more contextual background on the participants' roles and objectives, which would help guide their arguments (and is now a standard part of the introduction material).

CONCLUSION

The feedback from users of the AI simulations underscores a powerful idea: that AI assistants are a transformative tool far beyond a simple search engine. By leveraging the capabilities of these assistants, a developer can easily create a series of "small programs." These AI assistants can be tailored for a variety of tasks; I have only tried a few. But my experience demonstrates how AI assistants can become as second nature to a workflow as spreadsheets, offering a scalable and effective solution for a wide range of business needs.

The sims serve as a prime example of how this technology can create engaging and effective learning experiences. The simulations were praised for being more engaging and "super fun" than traditional, "very boring" compliance training. Users found them to be a "worthwhile exercise" for practicing soft skills like communication and critical thinking that are not easily learned from a book. The realistic nature of the simulations, complete with "complex situations" and "strong personalities," allowed professionals to prepare for difficult conversations and handle different on-the-job situations. Ultimately, these simulations empower professionals to move from wishing they had said something differently to knowing just what to say in the moment.

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