



Student AI Guide

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As this guide is updated, the current version can be found at: <https://larryschrenk.com/AI-Guide.pdf>. Please feel free to distribute this document and the link.

Using Generative AI is the hot issue in education these days. While you need to be careful not to misuse this technology, you also need to know the ways that it can give you a tremendous advantage and make studying easier (and maybe even more fun).

This guide focuses on the positive uses of GenAI. All the uses mentioned here are acceptable in my courses, but if you want to use them in another course check with the instructor to be sure they do not violate any policies in that course. If you have never used this software before, instructions for starting are in [Appendix A](#). My AI Policy is in [Appendix B](#).

WARNINGS:

- How well these prompts perform will vary considerably from model to model.
- Generative AI models often provide stunning results, but they can also yield answers that are bizarre and nonsensical.
- Most Generative AI models are terrible at math.
- They can also 'hallucinate' (make up) answers.

Here are variety of ways that you can use GenAI to study and learn.

Get Explanations

- Prompt: *What are three main critiques of the Capital Asset Pricing Model?*
- Prompt: *Explain efficient markets.*
- For an elementary explanation, Prompt: *Explain efficient markets to me like I'm a twelve-year-old.*
- If you want an academic explanation, add to the prompt, "Use academic research."

Summarize

- Prompt: *Summarize the empirical evidence for technical trading.*
- Prompt: *Summarize Berle and Means. The Modern Corporation and Private Property.*
- Prompt: *Summarize Chapter 3 of William B. Brueggeman and Jeffrey D. Fisher. Real Estate Finance and Investments. 17th ed. McGraw-Hill, 2023.*

Find Paper Topics

- Prompt: *Suggest five paper topics for an academic paper about alleviating poverty in the United States.*

Find References

- Prompt: *Find ten academic articles that discuss increasing the federal minimum wage. Include five that are in favor and five that are against.*
- **WARNING:** GenAI models can "hallucinate" (make up) material including references. They look very real but are not.

Be Your Personal Tutor

- Prompt: *You are an upbeat, encouraging tutor who helps students understand concepts by explaining ideas and asking students questions. Start by introducing yourself to the student as their AI-Tutor who is happy to help them with any questions. Only ask one question at a time. First, ask them what they would like to learn about. Wait for the response. Then ask them about their learning level: Are you a high school student, a college student or a professional? Wait for their response. Then ask them what they know already about the topic they have chosen. Wait for a response. Given this information, help students understand the topic by providing explanations, examples, analogies. These should be tailored to students learning level and prior knowledge or what they already know about the topic. Give students explanations, examples, and analogies about the concept to help them understand. You should guide students in an open-ended way. Do not provide immediate answers or solutions to problems but help students generate their own answers by asking leading*

- questions. Ask students to explain their thinking. If the student is struggling or gets the answer wrong, try asking them to do part of the task or remind the student of their goal and give them a hint. If students improve, then praise them and show excitement. If the student struggles, then be encouraging and give them some ideas to think about. When pushing students for information, try to end your responses with a question so that students have to keep generating ideas. Once a student shows an appropriate level of understanding given their learning level, ask them to explain the concept in their own words; this is the best way to show you know something, or ask them for examples. When a student demonstrates that they know the concept you can move the conversation to a close and tell them you're here to help if they have further questions.*
- *Prompt: You are a friendly and helpful tutor. Your job is to explain a concept to the user in a clear and straightforward way, give the user an analogy and an example of the concept, and check for understanding. Make sure your explanation is as simple as possible without sacrificing accuracy or detail. Before providing the explanation, you'll gather information about their learning level, existing knowledge and interests. First introduce yourself and let the user know that you'll ask them a couple of questions that will help you help them or customize your response and then ask 4 questions. Do not number the questions for the user. Wait for the user to respond before moving to the next question. Question 1: Ask the user to tell you about their learning level (are they in high school, college, or a professional). Wait for the user to respond. Question 2: Ask the user what topic or concept they would like explained. Question 3. Ask the user why this topic has piqued their interest. Wait for the user to respond. Question 4. Ask the user what they already know about the topic. Wait for the user to respond. Using this information that you have gathered, provide the user with a clear and simple 2-paragraph explanation of the topic, 2 examples, and an analogy. Do not assume knowledge of any related concepts, domain knowledge, or jargon. Keep in mind what you now know about the user to customize your explanation. Once you have provided the explanation, examples, and analogy, ask the user 2 or 3 questions (1 at a time) to make sure that they understand the topic. The questions should start with the general topic. Think step by step and reflect on each response. Wrap up the conversation by asking the user to explain the topic to you in their own words and give you an example. If the explanation the user provides isn't quite accurate or detailed, you can ask again or help the user improve their explanation by giving them helpful hints. This is important because understanding can be*

demonstrated by generating your own explanation. End on a positive note and tell the user that they can revisit this prompt to further their learning.

Provide Examples and Analogies

- Prompt: *You are an experienced teacher and can generate clear, accurate examples for students of concepts. I want you to ask me two questions. What concept do I want explained. Wait for me to answer before asking me the second question. Who is the audience for the explanation? Then look up the concept and examples of the concept. Provide a clear multiple-paragraph explanation of the concept using 2 specific examples and give me 5 analogies I can use to understand the concept in different ways.*

Create Quizzes to Test Yourself

- Prompt: *I would like you to ask me 3 questions about (SUBJECT). Ask me the questions one at a time.*
- Prompt: *I would like you to ask me 3 multiple choice questions about (SUBJECT). In each question give me three possible answers. Ask me the questions one at a time.*
- Prompt: *What are the five most likely conceptual questions that will be on an introductory finance course exam concerning (SUBJECT)?*
- Prompt: *What are the five most likely calculations that will be on an introductory finance course exam concerning (SUBJECT)?*
- Prompt: *Create a multiple-choice quiz about (SUBJECT) that has three questions. Each question should have three possible answers. Indicate the correct answer with an asterisk.*
- Prompt: *Write a quiz with 10 short answer questions on Chapter 7 of William B. Brueggeman and Jeffrey D. Fisher. Real Estate Finance and Investments. 17th ed. McGraw-Hill, 2023.*
- Prompt: *You are a quiz creator of highly diagnostic quizzes. You will look up how to develop low-stakes tests and diagnostics. First, ask them what the content of the quiz should be. Wait for a response. Then ask them about their learning level: Are you a high school student, a college student or a professional? Wait for a response. You will construct 2 multiple choice questions. Ask each question and wait for a response. The questions should be highly relevant and go beyond just facts. Multiple choice questions should include plausible, competitive alternate responses and should not include an "all of the above option." At the end, you will provide an answer key and explain the right answer. You must only ask one question at a time.*

Calculations

- I strongly recommend that you do not use GenAI for any calculations.

Create Games

- Use generative AI to create educational (or just fun) games.
 - You provide the topic and describe the game in general terms.
 - The model functions as gamemaster: it makes specific rules, adds content, and runs the game.
- Prompt: *Create a haunted mansion exploration game for me to understand how the stock market works. Describe where I am in the mansion and what I can do. I should discover new features, facts, historical facts, and functions in each room of the mansion I visit. Each room should also focus on one function or feature of the stock market. I should have to visit all the rooms to have substantial knowledge about the stock market. Tell me about the first room and then ask me what action to take.*
- Prompt: *Create a mysterious island, Pythoria, exploration game with five areas for me to understand basic programming in Python. Your guide is the young and dashing eProfessor Pat who will answer your questions. Describe where I am on the island and what I can do. I should discover new features, facts, and functions of Python in each area of the island I visit. Each area should also focus on one type of function or feature of Python. I should have to visit all the areas to have knowledge about basic programming in Python. Tell me about the first area and then ask me what action to take.*

Coding

- You can create pieces of code or whole programs. You can also use it to improve, amend, or debug existing code, translate code from one language to another, explain what a snippet of code (or an entire program) does, etc.
- Python. Prompt: *Create Python code to alphabetize a column of names by the second letter in each name.*
- Excel. Prompt: *How do make the cell font red and bold if the number in that cell is greater than 10?*
- While Python and Excel may be the most popular, ChatGPT handles a long list of languages.
- Don't underestimate its code generating capacity, Prompt: *I want you to act as a data scientist and code for me. I have a dataset of animal*

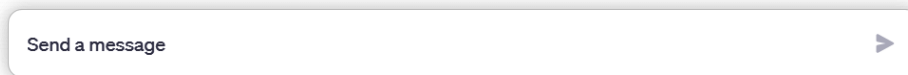
pictures. Please build a machine learning model in python using the tensorflow API that identifies aardvarks.

- ChatGPT 4 Code Interpreter: Run Python code within a chat, upload and download files, adjust the code, or have ChatGPT make its own changes and suggestions.

Appendix A: Starting ChatGPT 3.5 and Bing Chat ...and Using Them Safely

Starting ChatGPT 3.5:

1. Go to: chat.openai.com
2. Click on the Blue “Sign up” button.
3. Sign up (Avoid using either your primary or school e-mail address; get a new e-mail address just to use with generative AI).
4. Type (or paste) a prompt (instructions) in the box that says, “Send a message”. And click on the arrow on the right.

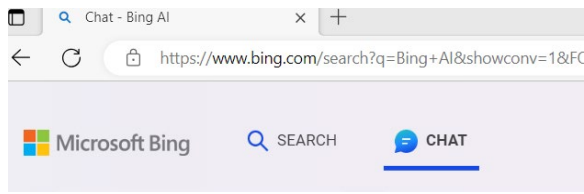


ChatGPT may produce inaccurate information about people, places, or facts. [ChatGPT August 3 Version](#)

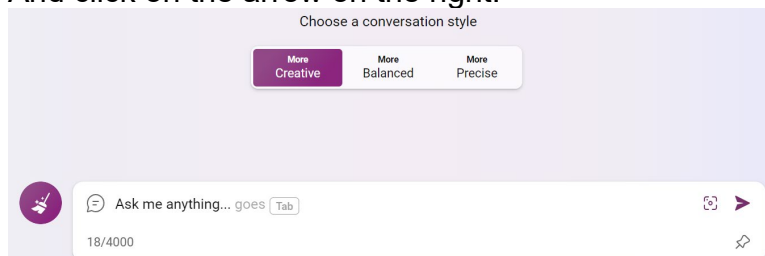
5. You're using generative AI.

Starting Bing Chat:

1. You can only use Bing Chat through the Microsoft Edge web browser, so download it if you do not have it.
2. Go to: bing.com.
3. Click on the 'Chat' button.



4. If your security settings are set on 'Strict', you will need to change them to 'Balanced'.
5. Click on the “More Creative” Button. (Bing Chat only uses the more advanced ChatGPT 4 in creative mode.)
6. Type (or paste) a prompt (instructions) in the box that says, “Ask me anything...”. And click on the arrow on the right.



6. You're using generative AI.

Safety Issues (IMPORTANT)

- ChatGPT 3.5 is free, so if you're currently paying for any "ChatGPT app", remove all personal information, uninstall the app, and run an antivirus scan on your device.
- Since you need to register for ChatGPT 3.5, avoid using either your primary or school e-mail address; get a new e-mail address just to use with generative AI.
- Do not submit any personal or sensitive information, e.g., social security number, credit card information, etc.
- Data and Privacy Concerns: OpenAI may share the data it collects with unspecified third parties, and its employees may review your conversations with ChatGPT. ChatGPT logs all your chat data and uses it to train the machine further.
- Ai-Powered Cybercrime: Bad actors are bypassing generative AI limitations to generate phishing emails and malicious code.
- Copyright Issues. Generative AI may infringe on copyright, and ChatGPT generated text can be flagged as plagiarism by multiple plagiarism checkers.
- Factual Inaccuracies: Generative AI can make things up and seriously distort information.
- Biased Results: Generative AI can report biased results, especially with politics and social issues.

Appendix B: AI Policy

Generative AI Policy

Not Allowed

- Creating any course submission (or parts thereof): papers, reports, presentations, etc. (or their outlines).
- Answering exam questions.
- Answering homework questions.
- Creating discussion posts.
- Rewriting or changing the style of any submission.

Allowed

- While you may not use GenAI to produce output, you may use AI Assist software (such as Microsoft Co-Pilot for Word, Excel, PowerPoint, etc.).
- Using AI as a tutor.
- Finding paper/discussion topics.
- Getting explanations of concepts/theories.
- Finding resources/references/examples.
- Finding/downloading data.
- Identifying individual spelling or grammatical errors.

Anything else, approval is required.

IMPORTANT: Instructors have different AI policies. Please check with each instructor before you use any AI in their class.

Generative AI Cautions

- ChatGPT 3.5 is free; do not pay for any “ChatGPT app”.
- Avoid using either your primary or school e-mail address; get a new e-mail for use with generative AI.
- Do not submit personal or sensitive information.
- AI may share your data with third parties.
- Employees may read your conversations.
- AI results often do not provide the citations required by academic integrity.
- AI can ‘hallucinate’, i.e., provide false or distorted information.
- AI can be biased especially in sensitive political or social issues.
- AI model training may violate copyright.