

TEACHING WITH AI

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SHOULD I EMBRACE GENERATIVE AI?

- Should I let students use ChatGPT to study and understand the material I provide in “theoretical” notes? Or is that cheating/hacking college?
- How about writing? Is it unfair to use ChatGPT to help you revise a text and provide improvements?
- If I let them use ChatGPT to do research and improve their papers, would they abuse it and have it write the whole thing? Would all the essays look the same?
- Even more controversial, Should we teach students to use ChatGPT to work with data and to analyze the data?
 - again, in my book the answer has to be a compromise. Not teaching them how to use technology would be a disservice... this technology is here to stay and *EVERYONE* is using it. Not being trained in how to use it is not providing a good education. But what is the right approach?

FIRST STEPS

- Before letting students use say ChatGPT, Bard/Gemini or Dall-E for class I did extensive tests
- I hired a TA/RA whose job was to teach students and myself useful ways to use ChatGPT, Tome.ai, Dall-E and other tools.
- I created a variety of GPTs, like apps on your phone you can create your own apps and you can restrict how much info is shared (SUMGPT, GreenGPT, Grant assistant, and others)
- I sat with him for at least one hour every week for two semesters to try things... he has graduated and we are still exchanging ideas and tips

Hi Prof, You should start using Claude3 Paid for Tasks coding and data.

I'm almost canceling my ChatGPT, plus Claude 3 paid is a perfect model. Opus in Claude

4:54 PM

let me check it out

4:55 PM ✓✓



I've been using for last 2 weeks I rarely open ChatGPT other than my Phone APP

4:56 PM

Uf man, it looks good. i will try to experiment. I have been using ChatGPT for my consulting work and it has been amazingly helpful

4:57 PM ✓✓

You

Uf man, it looks good. i will try to experiment. I have been using ChatGPT for my consulting work and it has been amazingly helpful...

Claude has a Larger context. You can give very long data, and it follows your instructions as it is.

4:58 PM

THE PLAN

- We came up with the following plan:
 - Teach students to create an AI tutor using ChatGPT
 - Teach students to use ChatGPT to do research and improve their writing
 - Teach students to use ChatGPT to find jobs and write cover letters
 - Teach students to use Dall-E, Tome.ai, and other tools to hack college... first learn the “manual” process, then hack it with gen AI

AI TUTOR

- We used the Open AI teaching page to teach students how to create an AI tutor for my course “BUS160 Competition and Strategy”
- <https://openai.com/blog/teaching-with-ai> (Create an Ai Tutor page)
- Other tools to do the same:
- <https://www.youtube.com/watch?v=qYtdu8gavvw>



D. Create an AI tutor

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.

WRITTEN ASSIGNMENT USING CHAT GPT

ChatGPT 4 ▾

***I asked students to turn in the prompts they used in ChatGPT

AL

You

Write an essay on Understanding the semiconductor chip industry in 2000 words.

Answer the following questions in the essay

What is a semiconductor chip?

Understand how the semiconductor chip industry is organized worldwide (if you can use five forces for chips)?

What are the relevant parts of the value chain? Who are the main players in each part of the value chain?

Where is most of the value added?

Explain which activities in this value chain Apple has decided to undertake itself and which parts it outsources to other players?

If possible, write it altogether as an essay in the style of an advanced MBA student.

THE BEAUTY AND THE BEAST

- The outcome was beautiful and terrible at the same time!
- I got 20 amazingly written essays about the microchip global industry, its configuration and challenges.
- Only 1 student didn't use ChatGPT to write it and unfortunately it was poorly written and had less research and insight than everyone else's

THE BEAST...

- 95% of the essays were saying the same thing... NOT EXACTLY with the same words, but for the trained eye, they were basically the same essay.
- While I read the first one with excitement, by the 10th I was bored, and by the 20th I hated myself and the assignment....
- There were some exceptions...
- Since I asked for their prompts, I could see that some students used ChatGPT as help but not as the only source of information. In fact, they gave prompts to add outside research and observations they had... those were the best essays!

ChatGPT Prompts

write a max 2000 words memorandum about the semiconductor chip industry answering the following: 1. What is a semiconductor chip? 2. Understand how the semiconductor chip industry is organized worldwide (if you can use five forces for chips)? 3. What are the relevant parts of the value chain? Who are the main players in each part of the value chain? 4. Where is most of the value added? 5. Explain which activities in this value chain Apple has decided to undertake itself and which parts it outsources to other players? write in the style of an advanced MBA memo

Focus on 1. As a business strategiest you want to understand the refined and raw materials used, the geography and the required supply chain for manufacturing, time for research and development, the lifetime of a chip, usage, and application

lets move to 2. in the original prompt i gave you. to understand how the semiconductor chip industry is organized worldwide using Porter five forces. Use the sources bellow to provide insightful information, figures, and numbers to better articulate the 5 forces and their significance from a weak, moderate, and strong scale.

<https://aws.amazon.com/blogs/industries/the-semantics-of-data-sharing-across-the-semiconductor-supply-chain/>

<https://d1.awsstatic.com/whitepapers/architecture-monthly/AWS-Architecture-Monthly-March-2021.pdf>
AWS-Architecture-Monthly-March-2021

<https://www.mckinsey.com/industries/industrials-and-electronics/our-insights/semiconductor-fabs-construction-challenges-in-the-united-states>

Lets move to the next original question i asked #3 and make sure its in an essay format of a top MBA student.

3. What are the relevant parts of the value chain? Who are the main players in each part of the value chain? you may use the McKinsey source again, if you use others please link them. Focus on breaking down the value chain into: Customer products, chip Manufacturer (companies that only manufacture chips but don't design them), chip designer/makers, material refinery, machines and tools, and raw materials. indicate who are the players (what do they use chips for), their competitive advantage and do they face threats from startups trying to disrupt their market share today. make sure to include Qualcomm, TSMC, Arm, NVIDIA, ADI, etc. Make sure to also explicitly indicate the range of gross and net margins expected and the range of R&D expenditure as % of revenue in each section of the value chain (I want to see numbers) consider the following:

<https://www.accenture.com/us-en/insights/high-tech/semi-value-chain>

Now create a single table with players for each section of the value chain. The columns of information are: section of the value chain, player, ticker symbol, product, customers, revenue growth, gross margins, net margins, R%D expenditure as % of revenue, % market share, and technology that threatens disruptions. You must also meet the following requirements in 1-5: 1. this is for an excel file so needs to be able to copy and paste (no code) 2. You have to use the players you mentioned previously and add new 2-5 more players 3. revenue growth - use 2021 to 2022 growth. 4. Gross margins, net margins, R&D expenditure as % of revenue, % market share - use reported information from 2022 and indicate it by adding (FY22) 4a. But if a player has no public financial information then use an approximation and put a star on the value and add a note at the bottom of the table that this is an approximation as no public data is available 5. if no technology disruption then N/A the objective is to provide management with a powerful tool that gives details to the industry value chain

WORKING WITH DATA

- I have a data analysis section in my undergraduate course BUS160 Competition and Strategy
- We teach them two sessions on how to analyze data, how to merge databases, etc...
- The assignment is simple. I give them a large database in excel, they merge some information from another database and then they build graphs and tables to summarize and analyze the data
- A few weeks later I teach them how to do the same work using one of the Data Analysis GPTs in ChatGPT. The work that takes them 3-9 hours can be done in about 30 minutes using generative IA



pm_forCHatGPT.xlsx
Spreadsheet

This database has education and employment information for a sample of people.

Each person has a number in column "order" . The columns also have the following:

- occupations of these people, if they had more than one the occupations are numbered as occupation1, occupation2.

- For each occupation there is also the name of the organization where they worked denoted as Organization1, Organization2, and so forth.

- For each occupation and organization there are dates of when that occupation was held by an individual, in the columns denoted as Occ1_From_year (the year when employment started) and Occ1_To_year (the year occupation 1 ended)... there are columns with the years of each occupation with names denoted as Occ1_From_year, Occ1_To_year, Occ2_From_year, Occ2_To_year and so forth

I want to clean the organization names to make sure that there are no differences because some are in caps or some say things like "corporation" when others do not have that so that names of organizations are uniform





OTHER TOOLS FOR STUDENTS



ChatGPT

Yes, there are several AI-powered presentation creation apps available that can help you create presentations quickly and easily. Here are a few examples:

1. **Prezi:** Prezi is a cloud-based presentation software that uses AI to help users create engaging presentations. It offers a variety of customizable templates and a drag-and-drop interface to create visually stunning presentations.
2. **SlideBot:** SlideBot is an AI-powered presentation creation tool that uses natural language processing (NLP) to create a presentation based on the text you input. It offers a variety of customizable templates and animations to make your presentation more engaging.
3. **Canva:** Canva is a graphic design platform that also offers presentation templates and an AI-powered design tool that suggests design elements based on your content. It offers a wide variety of customizable templates and graphics to create visually stunning presentations.
4. **Zoho Show:** Zoho Show is an online presentation tool that offers an AI-powered assistant called Zia. Zia can help you create a presentation by suggesting layouts, images, and text based on the content you input.

PROTOTYPING USING DALL-E

- In BUS233 Entrepreneurship and Rapid Prototyping we teach students to use DALL-E to create AI assisted prototypes of physical products
- <https://openai.com/dall-e-3>
- For some teams, we use 3D printing or other forms of physical prototyping, but for teams that have more ambitious products sometimes these AI-renderings are the best help to present their ideas



JOB APPLICATION COVER LETTERS

- Students at Brandeis need to send tens if not hundreds of job applications
- For each job there is a custom cover letter that summarizes why each applicant is ideal for the job
- This is the kind of task that can be easily done and automated with AI and that frees up student time to either look for other jobs or to focus on school
- Generative AI can help students to customize each application using their CVs and their student profile
- Yet, it requires some refinement...



cv-Musacchio.pdf

PDF

I am applying for the position described below. Use my attached CV to write a cover letter:

Columbia University in the City of New York invites applications for the Lemann Family Foundation Professorship of Brazilian Studies. This full-time position represents a unique opportunity for an accomplished scholar to contribute to research and teaching on contemporary Brazilian issues. The appointment may be at the associate (tenured) or full professor level.

The successful candidate may be appointed in the Department of Economics, History, Political Science, Sociology or the School of International and Public Affairs (SIPA). Joint appointments are also possible. Scholars from other areas but with a robust scholarship in public policy will also be considered.

We expect leading scholars in their fields, committed to the study of Brazil and sustaining an active research and publication agenda. Beyond teaching courses in the field of specialization, the candidate will be expected to actively participate in the activities of the Lemann Center for Brazilian Studies within the Institute for Latin



Dear Hiring Committee,

I am writing to express my enthusiasm for the Lemann Family Foundation Professorship of Brazilian Studies at Columbia University, as advertised. For the past 20 years, I have dedicated my career to Brazilian studies, leveraging research on Brazil to extract insights relevant to economics, policy, and management scholars, as well as policy makers.

My academic track record reflects a steadfast commitment to exploring Brazil's historical challenges through the lens of economic history and applied economics. In Brazil, I am recognized for my contributions to

AI INTERVIEW PARTNER

ChatGPT 4 ▾



You

I am going to give you a job description below. I want you to create questions as if you are interviewing a candidate who is coming out of the business major of a liberal arts college:

Credit Support Analyst

JPMorgan Chase

Anywhere

Apply on JobServe

Apply on Jooble

16 hours ago

Work from home

Full-time



ChatGPT

Based on the job description provided for a Credit Support Analyst position at JPMorgan Chase, here are some interview questions tailored for a candidate coming from a business major at a liberal arts college:

1. Educational Background and Relevant Experience:

- "Can you describe how your education in business has prepared you for a role that requires both audit and financial services skills?"
- "Please share an example from your past experiences where you had to use your audit or inventory management skills."

2. Organizational and Time Management Skills:

- "This job requires strong organizational and time management skills. Could you give an example of a complex project you managed during your studies or previous internships? How did you ensure its successful completion on time?"

3. Professionalism and Communication:

- "Can you provide an instance where you had to interact with senior-level individuals? How did you handle the communication?"

TAKEAWAYS

- Generative AI is here to stay and not teaching students how to use it properly may disadvantage them in their professional life
- Yet, we need to teach them how to create personal profiles, how to refine prompts, how to integrate their own knowledge and creativity in their prompts, etc...
- I find it to be a useful tool once they have learned to do the work “manually”
- The capacity of IA to summarize information and work with data is improving so fast that we will need to rethink what we teach in our data analytics classes