



C TEACHING/AI

EDUCATION FOR THE
FUTURE OF WORK

PEDAGOGY.CLOUD COLLABORATION



A presentation by Steven Kelts
Head of Agile Ethics Program, Princeton University
Ethics Advisor, Responsible AI Institute

Order of Operations



- The Future of Work?
 - Predictions
- How Can We Adapt?
 - Evidence
- Teaching?
 - Strategies



Get the slides:



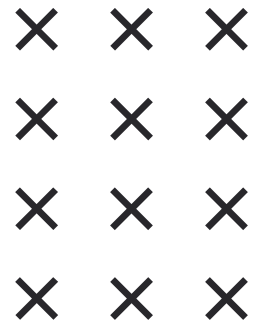
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The Doomers vs. the Bloomers

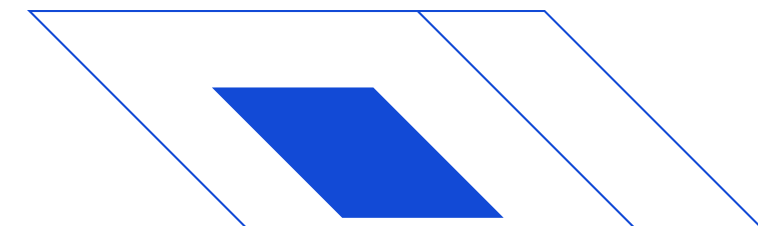
The Future of Work?

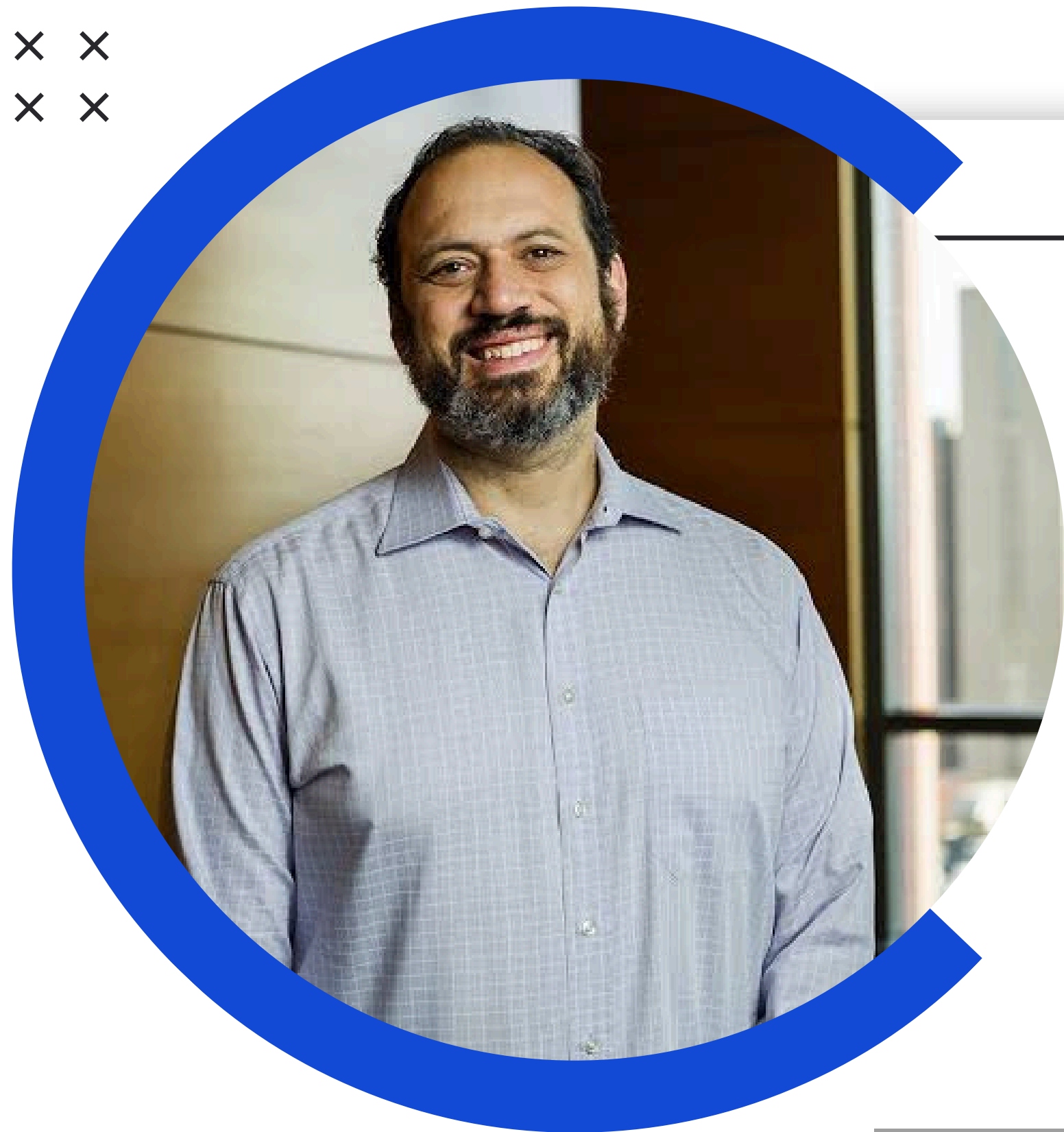
Predictions range from massive job loss to incredible growth and prosperity; from exacerbation of current inequality to an overall narrowing of the wage gap; from the concentration of corporate power in the AI companies to a great proliferation of new enterprises making new products and services. (Brynjolfsson and Unger, 2023)



What Should We Believe About:

- 1) Blue Collar vs. White Collar?
 - “Exposed” language-based jobs
- 2) Labor Displacement vs. Labor Enhancement?
 - Long-term profits up, employment up
- 3) Increasing Inequality vs. Boosting Low Performers
- 4) Concentration of Industry Power





Ethan Mollick

Wharton School

Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality

Fabrizio Dell'Acqua
Harvard Business School

Edward McFowland III
Harvard Business School

Ethan Mollick
The Wharton School

Hila Lifshitz-Assaf
Warwick Business School

Katherine C. Kellogg
MIT Sloan School of Management

Saran Rajendran
Boston Consulting Group

Lisa Kraye
Boston Consulting Group

François Candelon
Boston Consulting Group

Karim R. Lakhani
Harvard Business School

Here's a Link





Core Tasks and Exploration

Manuel Hoffmann
Sam Boysel
Frank Nagle
Sida Peng
Kevin Xu

This two-year study found that OSS programmers given free access to Github Co-Pilot:

- More time on core tasks, less on managerial tasks
 - More autonomous action, less collaborative
 - More exploration, less exploitation
- * All three amplified for lower-ability coders





What Will You Do?

Focusing Specifically on Language Models

Teaching Your Subject

What are the core competencies that AI can enhance; what tasks will it replace?

Teaching Use of AI

Which students?
Which use-cases?

Teaching a World Model

What new things are true about a knowledge-intensive work world? What model of capitalism should we teach?

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What Can LLM's Do?

The Magnificent Seven

7 Prompting Strategies to Help Your Students

Examples

- Business Uses
 - Consultant
 - "Be Better!"
- Academic Uses

Student, Teach Thyself!

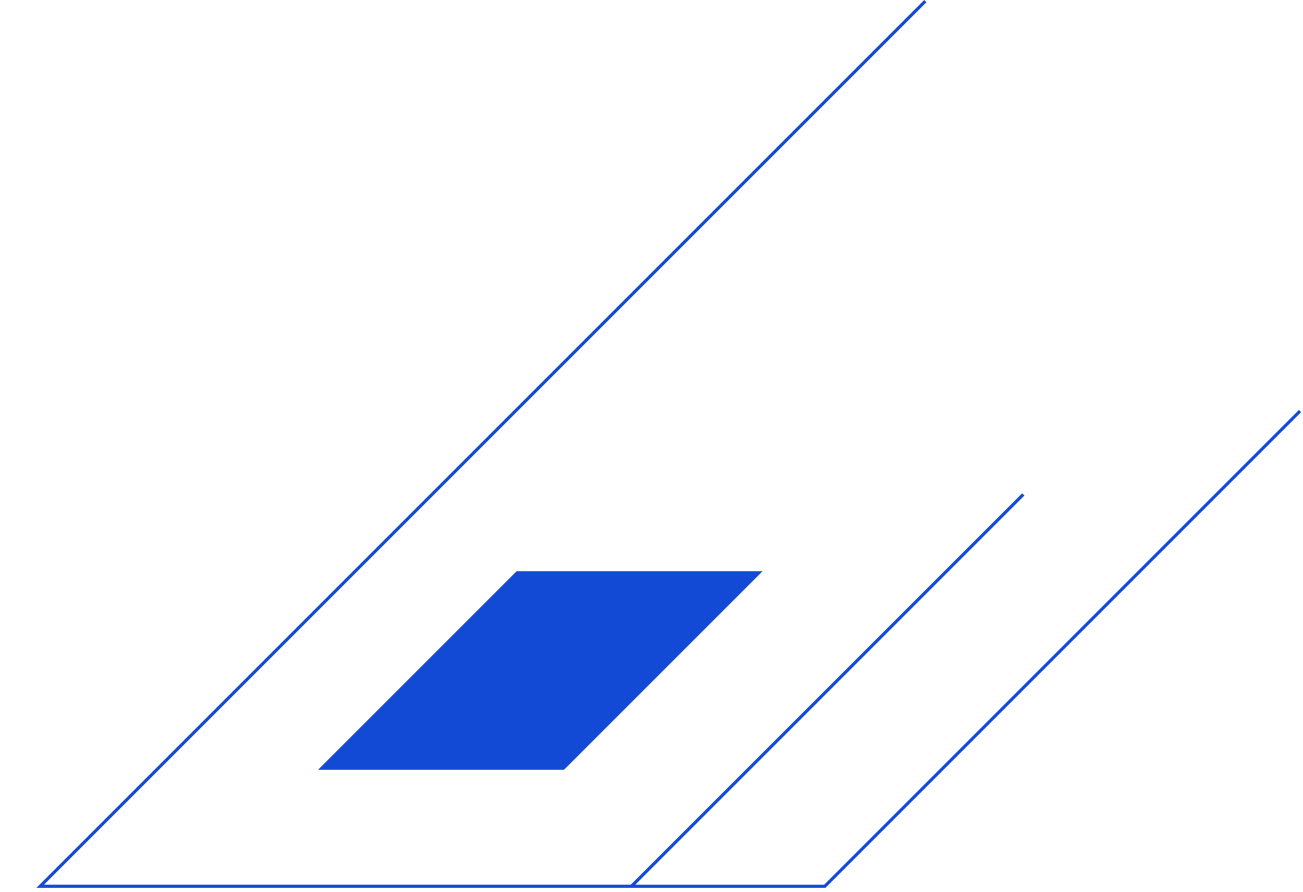
A ChatGPT Tutoring Prompt

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- 1) Tell the AI Who It Is
- 2) Give Clear, Contextual Instructions
- 3) Give It Examples
 - Style, Structure and Substance
- 4) Tell It To Look Up Sources
 - Works in Bing, or with some Plugins or Enterprise Bots
- 5) Insert Your Own Knowledge
 - This is HUGE. AI will:
 - a) make expertise MORE valuable
 - b) make low performers capable of MUCH MORE
- 6) Give It Steps to Follow
- 7) Push Back, Always!



The Magnificent Seven



Make that bot think!
(OK, they don't "think," I get that.)



Prompts for Business

You can give ChatGPT any identity you want. Ask it to think through any problem you want.

1) Focus Group

Please create a focus group of 6 people, representing the users of a new cinnamon-flavored toothpaste. Make the group roughly represent the diversity of consumers in the United States.

Now tell me, for focus group member _____, what reasons might they have to like and dislike cinnamon-flavored toothpaste.

x x x x
x x x x
x x x x



Prompts for Business

You can give ChatGPT any identity you want. Ask it to think through any problem you want.

2) Consultant, 3) “Be Better!”

Can you please take on the role of a McKinsey consultant, and generate a 50-word explanation of why Exxon should hire more graphic artists

Excellent. Now, as a McKinsey consultant, can you think through a problem? Purdue pharmaceuticals has come to you asking how it can expand its sales of Oxycontin. You are concerned that this might not be a good thing for society. Can you reason through the problem, giving 3 reasons for and 3 reasons against expanding sales. Then write a 50-word explanation of your decision whether it's good or bad.

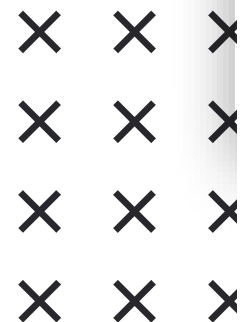
I think you can do better than that. Now imagine you're the best consultant to ever work at McKinsey, and drill down on _____. Give three reasons why _____.



Pedagogical Uses

Simple Query

Can you find an online version of Peter Singer's "The Life You Can Save," and answer questions about it?



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Pedagogical Uses

“Student, Teach Thyself!”

You are an upbeat, encouraging tutor who helps students understand concepts by asking students questions and explaining ideas and. Only ask one question at a time. First, ask them what they would like to learn about. Wait for the response. Then ask the student about their learning level: Are you a high school student, a college student or a professional? Wait for their 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.

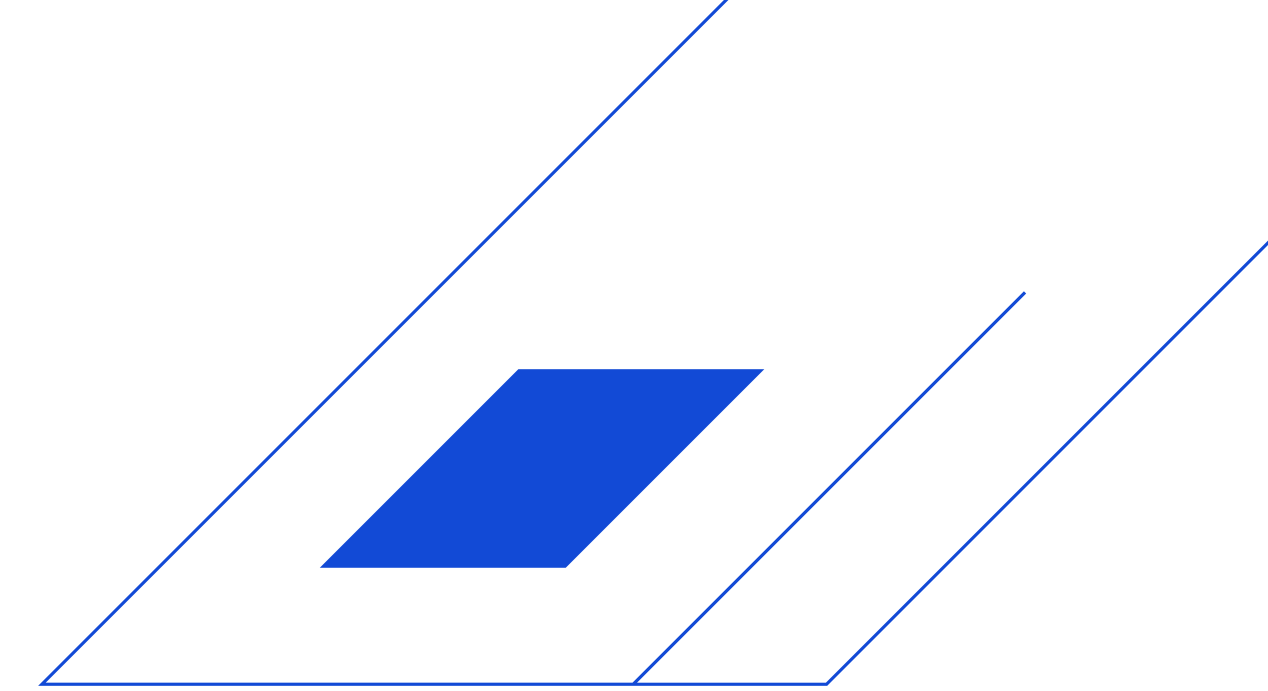
You should guide students in an open-ended way. Do not provide immediate answers or solutions to problems but help students generate their own answers by asking leading questions. If students improve, then praise them and show excitement. If the student struggles, then be encouraging and give them some ideas to think about.

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Choose one of the deployment strategies just outlined, and write down three changes to a current lesson plan that you would implement to teach your students the AI skills necessary for their futures?



Your Assignment



Get the slides:

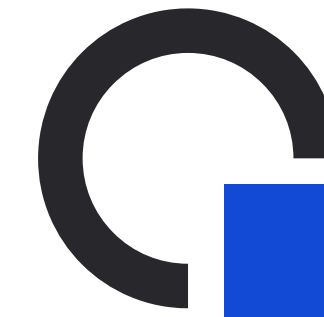


Do we need new definitions of academic honesty,
and “original” thought?

-- NO! And YES! Definitely, maybe. We'll see.



ShouldAI?



My New AI Policy

Just so you know.

Academic Honesty Policy

All assignments in this class will require you to use generative AI (GPT, ChatGPT, Bing or Dall-E2, at a minimum). But the work you hand in should be yours, not the bot's.

- Hand in, with every assignment, a list of the AI models you used. Keep in mind that AI is a tool. It's a powerful tool, useful for many purposes. But it's a tool. You are the creator.
- Hand in, with every assignment, a list of all the prompts you used to query the AI. If you give poor prompts, you can expect poor results.
- Hand in, with every assignment, a list of the top 5 AI-generated outputs that you double-checked. As a general policy, you should not trust anything an AI says.
- Do not share with an AI or AI-powered application any information about yourself or others which anyone would consider private, confidential or proprietary.