

# AI: Managers, not Makers

## Artificial Intelligence In Business

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# Today



## Learning Objectives

- Position AI and ML topics in business school curriculum.
- Share experiences and available materials.
- Gather input on current struggles.

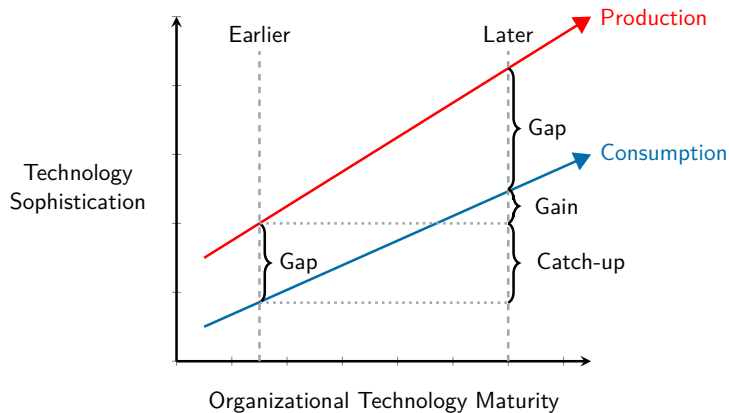


## Agenda

1. **C**onsumption versus Production
2. **R**andom Techniques and Ideas
3. Content for **Y**ou

*Somehow the acronym / mnemonic CRY seemed right...*

# Producing versus Consuming Artificial Intelligence



- Advanced tools becoming easier and easier.
  - Once reports, then spreadsheets, then regression, now ML...
- Expectations for sophistication becoming pervasive.
- Pressure to close gap accelerating.

<https://sloanreview.mit.edu/article/reskilling-talent-to-shrink-technology-gaps/>

# Why does production versus consumption matter?



- We, personally, are likely interested in creating models.
  - ✓ But the majority of students will be consumers, not producers.
- Even consumption role benefits from understanding production.
  - ✓ Need savviness to avoid becoming pointy-haired boss in Dilbert.
- Organizational advantage depends more on consumption than production.
  - ✓ Our students influence that consumption.

*How then can we improve consumption through our classes? Five ideas that I've tried...*





## Can your students tell “could” from “should”?



### Ethics of wielding an analytical hammer

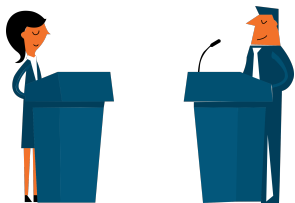
- Organizations no longer ask themselves:  
“Could we do X with data?”  
The answer is now often “yes”.
- Instead, now:  
“Should we do X with data?”

We didn't have to consider "should" if we couldn't. But now we can.

- Topics like governance are not headline-worthy.
- But no engineer wants a headline of “bridge collapses”
- Like engineering matured from ad hoc beginnings, organizations need ethical processes-- IS can lead.

<http://sloanreview.mit.edu/article/the-ethics-of-wielding-an-analytical-hammer/>

## 2. Practicing critical thinking.



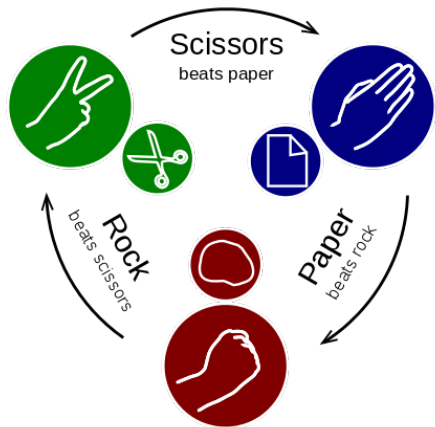
- ① I provide a dataset with a focal question.
- ② I randomly assign two groups opposite positions.
- ③ Groups present in favor of their position and question the other group's presentation.

- Despite arbitrary positions, students somehow align with their assigned position.
- The value is more in the scrutiny of the opposing view than in the support for their own position.

I do mini-version of this with news articles as well. ("What 3 questions would you ask the authors of this story? Do you believe the article?")

<http://sloanreview.mit.edu/article/detecting-bias-in-data-analysis/>

### 3. Learning in new ways.



[https://en.wikipedia.org/wiki/Rock\\_paper\\_scissors](https://en.wikipedia.org/wiki/Rock_paper_scissors)

*Snacks in new technical models as well as adversarial learning, cold start, equilibria.*

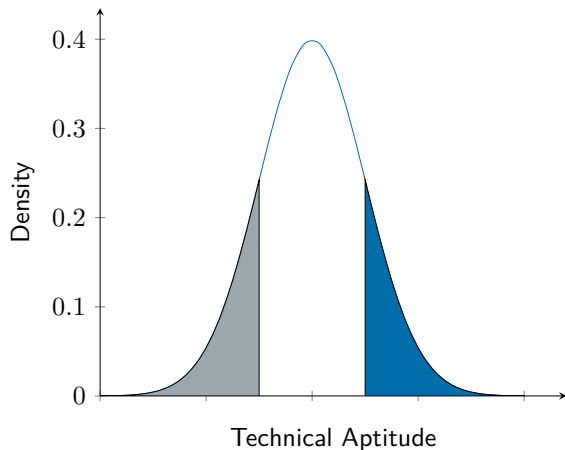
Setup:

- People already know rules.
- Play a few rounds with neighbor and record.
- Each build model to play.
- Play more using models.

Really rich exercise:

- Are you teaching machine?
- Do you learn from machine? How?
- How can you work with the machine?

## 4. Tailoring content to individual students.



- Advanced questions with exercises. I position these as the "director's cut".
- Additional models? Hyperparameters? Additional features?

## 5. Graduating from school conditions.

### Dependent...

Panicking Student

 My computer isn't working.


Sam

 Sorry. What isn't working?


Panicking Student

 I get an error.


Sam

 What error? Can you send me your script?


Panicking Student

 [script]

Sam


 Ahh, I see. [solution]

Panicking Student

 Thanks! Mostest amazingest prof ever!!! 🙏

### More independent...


Panicking Student

 I'm getting an error in this [script].

Sam

 Ahh, I see. [solution]

Panicking Student

 Thanks! Mostest amazingest prof ever!!! 🙏


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### Even more independent...

Sam

 Everything OK?

Student

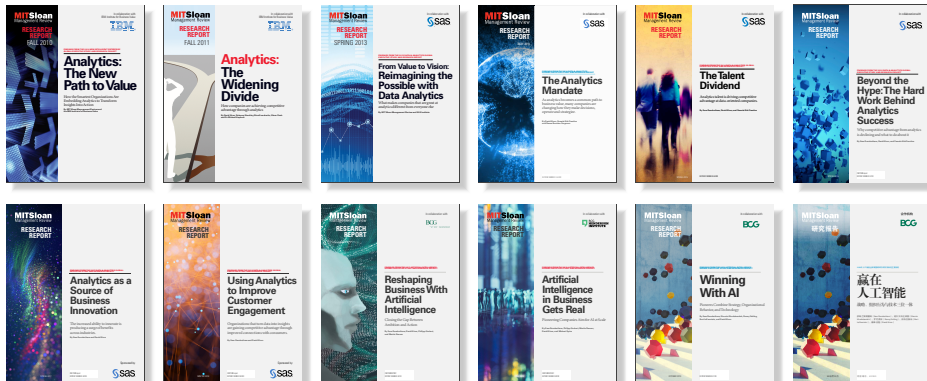
 I had a problem but I figured it out. 🙏

*I'm sure most of you already do this. Tarpitting helps.*

# MIT Sloan

## Management Review

Quick overview of content available for you....



9+ year research program. Each year, I research the use of analytics, ML, and AI in business.

- Dozens of managerial & executive interviews
- Large (3K+) global survey





# "Me, Myself, and AI" podcast



<https://sloanreview.mit.edu/audio-series/me-myself-and-ai/>

- Season 1: Fall 2020
- Season 2: Now, Spring 2021
- Season 3: Just renewed! Fall 2021

## Season 1:



This Crazy Wave We're Riding: **Walmart's** Prakhar Mehrotra on the Ups and Downs of AI



Advancing Health Care With AI: **Humana's** Slawek Kierner Talks Synthetic Data and Real Lives



'The First Day Is the Worst Day': **DHL's** Gina Chung on How AI Improves Over Time



Better Together: Mattias Ulbrich on Combining Coffee, Business, and Technology at **Porsche**



Fashion Forecasting: Arti Zeighami on Implementing AI at **H&M** Group



Tech and Ethics: The **World Economic Forum's** Kay Firth-Butterfield on Doing the Right Thing in AI

# "Me, Myself, and AI" podcast

## Season 2:



Less Algorithm, More Application: **Lyft's** Craig Martell



Games, Teams, and Moonshots: **Google Cloud's** Will Grannis



Learning, Engagement, and Empowerment: **1-800-Flowers'** Amit Shah



Designing a Better Future: **Mastercard's** JoAnn Stonier



Prototypes, Pilots, and Polymers: **Cooper Standard's** Chris Couch



DIY With AI: **The Home Depot's** Huiming Qu

Coming in next few weeks:

**Notre Dame-IBM Technology Ethics Lab**

**PepsiCo**

My content includes:

12+ Industry reports	→	Background reading?
4 Case studies	→	Pre-reading + in class discussion?
50+ Online articles	→	In class "read and reflect"?
12+ Podcasts	→	Covid-safe substitutes for guests?

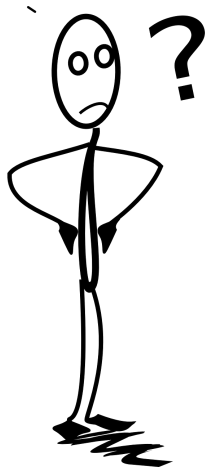
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Your content?

- Online articles? Print articles?
- Feel free to send to me for a pre-read.
  - I don't handle submissions. But I am glad to give feedback.
  - I may not know what SMR will accept but I'm getting much better at knowing what editors will NOT accept.
  - I want to promote the IS voice here.

# Help



Normally people end by asking "any questions?". I won't. Instead, I have questions for this group.

- 1 How can we share artifacts to support teaching that we can collaboratively create?
  - I get the sense that we each spend time creating redundant materials, exercises.
- 2 What level of technical depth fits in a business school curriculum?
- 3 I struggle with the re-prep requirements each semester since so much changes. How do you avoid spending lots of time matching current developments with your enduring concepts?
- 4 How do you keep tool agnostic? Or is that a goal?

*Thanks!*



- Contact me for content. Some I can't post publicly but can share individually.
- Let me know if I can help you with SMR.