HCH Enterprises

Are Machines Learning Faster Than Humans?

- Value and Consequences in Adopting Generative AI -

New York Metro Joint Cyber Security Conference
10/19/2023

Agenda

01 Speaker and Session Introduction

02 What is Generative Artificial Intelligence?

03 Implications to AI & ML

04 Key Takeaways

05 Questions and Answers

06 Closing Remarks

Introductions

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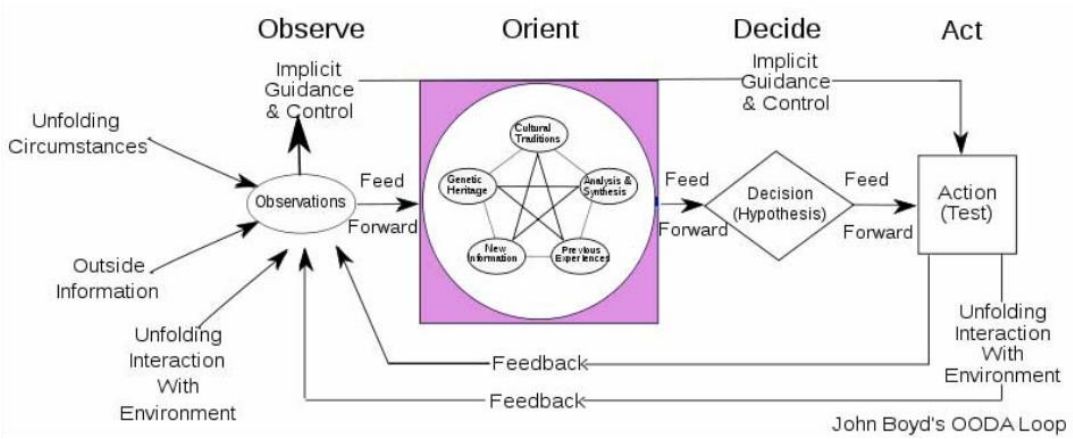
We will…

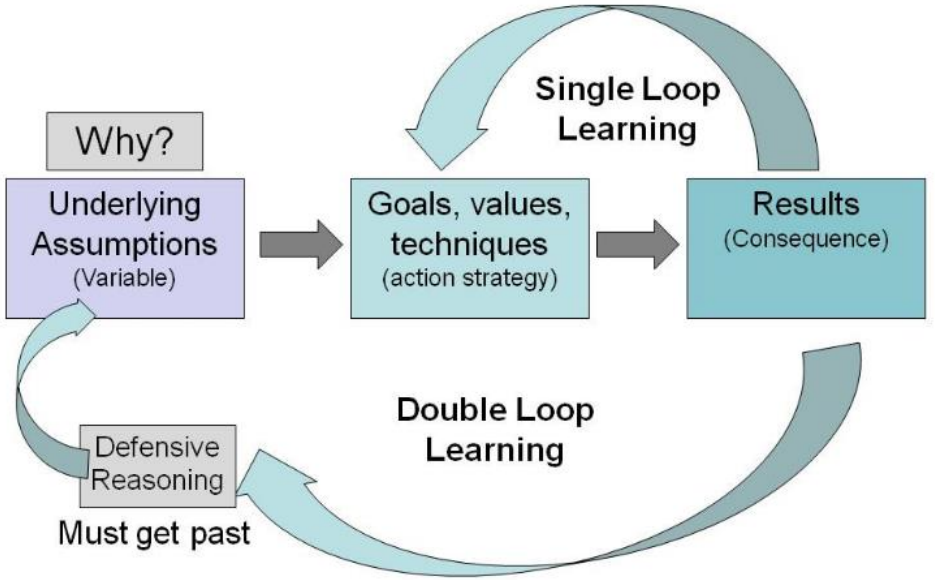
- Frame generative AI opportunity.
- Explore the legal, business, economic, political, and technical implications coming our way due to AI/ML adoption.

Intelligence Through Learning

- Systems Thinking:
  - Open loop
  - Closed loop
  - Single loop
  - Double loop

- ML-Enabled Systems:
  - Learning Apprentice
  - Ground Truth
  - Advanced Human Decisions



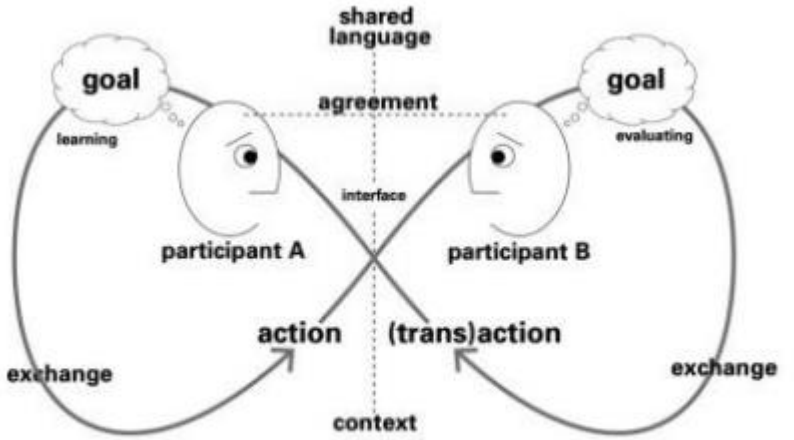


Credit: Argyris & Schon

Dissecting Generative Opportunity

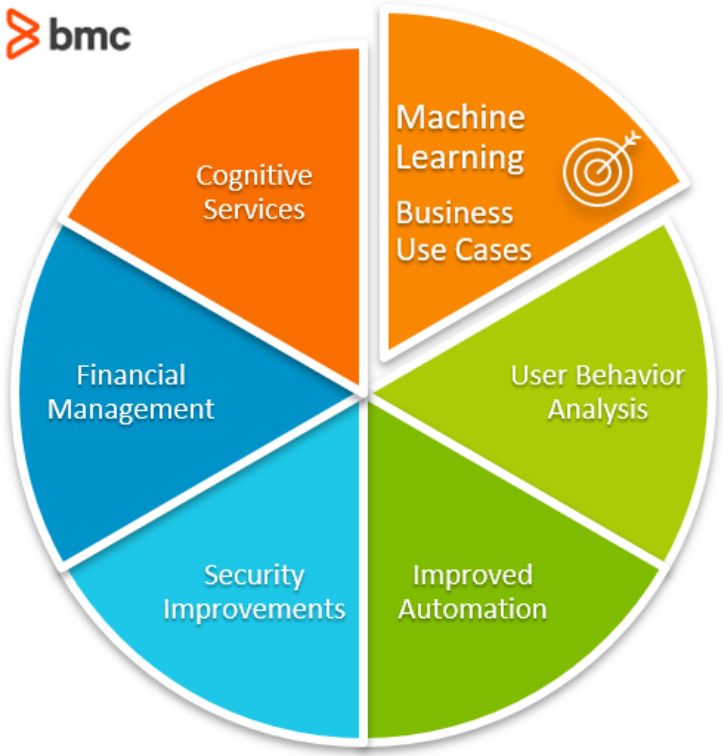
- Conservations w/Learning Apprentice:
  - Context
  - Language
  - Exchange
  - Agreement
  - Action/transaction

- Conservations for:
  - Design – transforming process
  - Construction – maturing/stabilizing process



Source: After Dubberly design office and Paul Pangaro

New and Transformed Markets



Pros:

- Proven SML use cases.
- Automation through No-Code Programming
- R&D in Deep Neural Networks (DNNs)
  - Couple with Supervised Learning
- Enables fail fast / fail cheap innovation
- Big data / big generative intellegence
- Increased aoption in voice and image processing

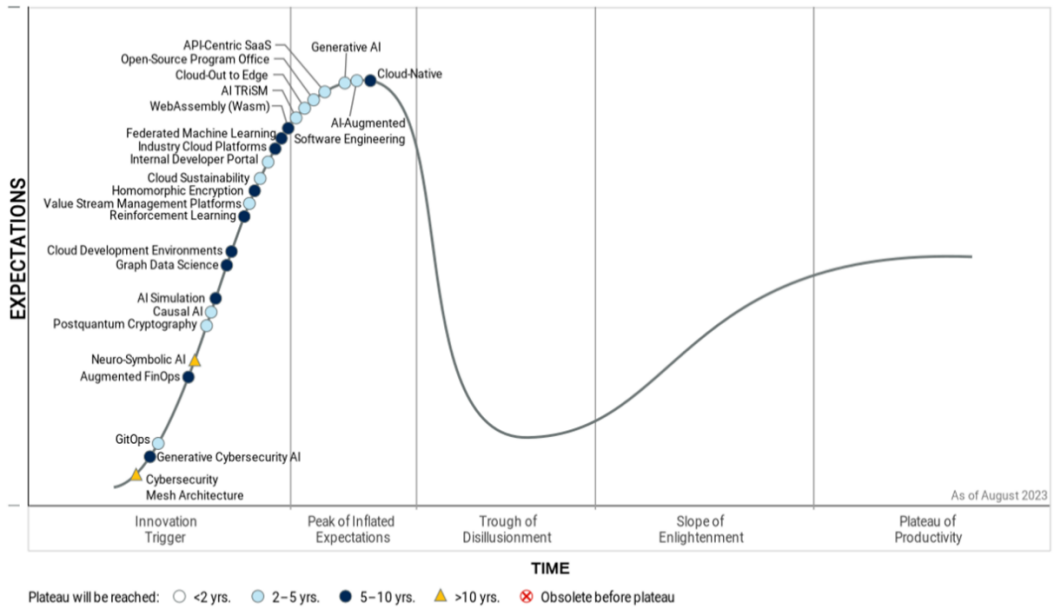
Cons:

- Resistance to change, radical culture shift
- Minimal independent validation
- Competence narrower / more fragile than human decision-making

High Growth Yet Volatile Markets

Pros:

- Demand for IT products & services
- Business change due to IT
- Higher paid non-SML labor
- Alternative SML assisted labor
- Higher ROI (⇩cost, ⇧productivity)



Cons:

- Global competition, Geographic (fly over) impacts
- Significant impact to non-technical workforce
- Risk of price gouging, diminished ROI

Apply/Revise Existing Laws

Pros:

- Protect IP for any AI algorithm/software
- IT rules already established in laws
- Terms of service templates for AI-as-a-Service

Cons:

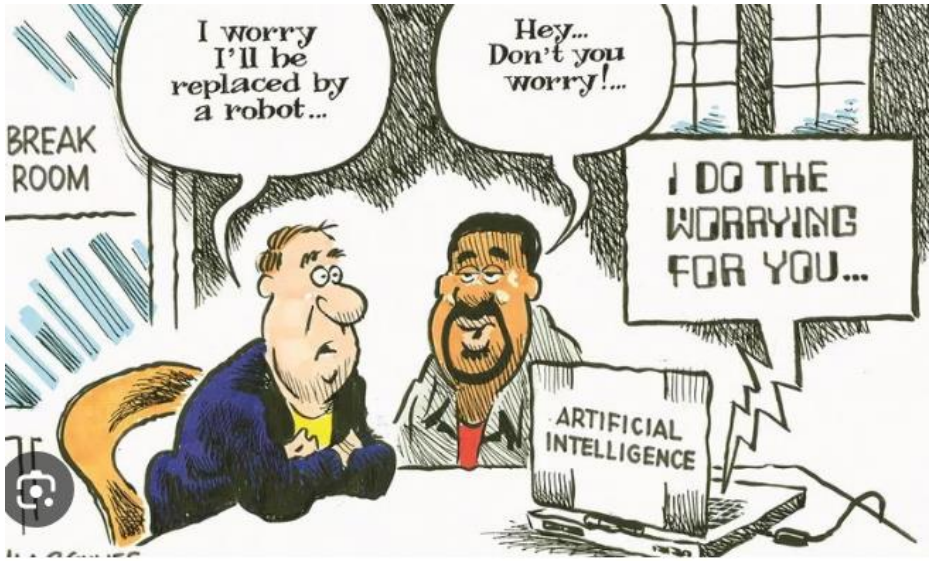
- Failure/miss-use could cause harm
- May perpetuate biases & discriminiation

Credit: Frontiers

Rise in Inequity

Pros:

- Accuracy equity being measured
- Ensure some value to all



Credit: Dallas Morning News

Cons:

- Compounds issues w/modern-day DEI
- Legacy data made by biased humans
- Mathematically impossible to satisfy outliers
- ML not designed to treat decision-subject as an individual
- Value not equal, Egalitarianism is real

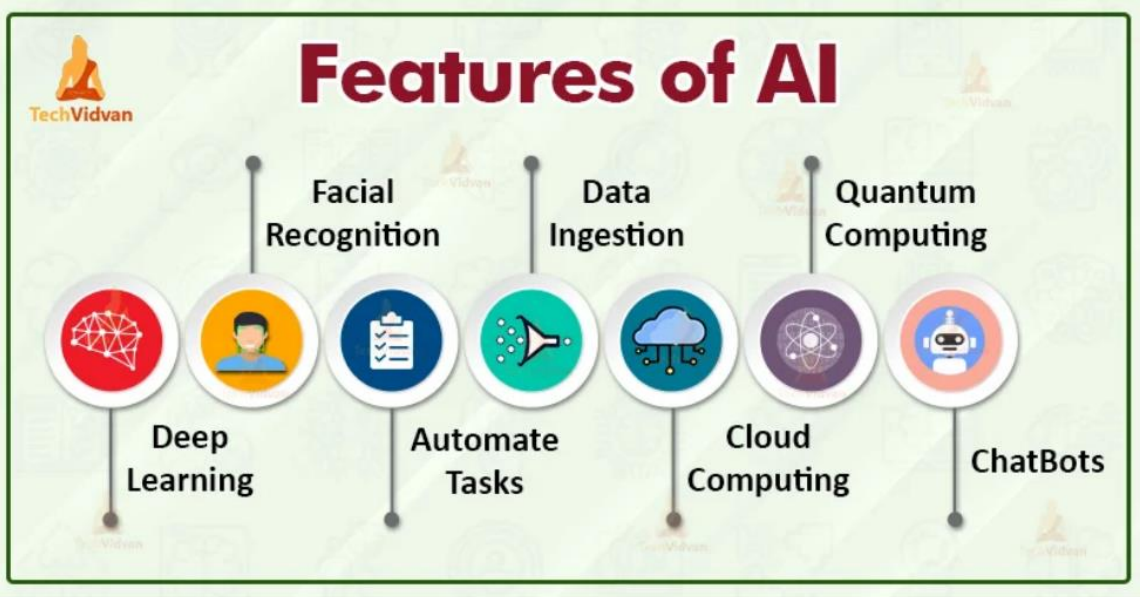
IT Transformation

Pros:

- Increased usability/adoption
- Citizen developer
- Low-code/no-code
- Higher quality/lower cost

Cons

- Limited skills/knowledge of AI/ML
- Inability to strictly manage change
- Minimal independent proof / trust



Key Takeaways

Meeting Your Requirements

Bigger issue than any one company, state, or country might solve.

1. Develop organizational strategies and tactics to guide adoption.
2. Tactically focus on what is Suitable for Machine Learning (SNL).

Transcends traditional market segmentation governance.

1. Evaluate using business-centric risk/reward.
2. Monitor evolving industry standards.

Defies traditional knowledge.

1. Follow the science and adopt only what has been proven.
2. Closely monitor Generative Cybersecurity AI.

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