Today's Panel

Reyner Fouch (M)
Director
KPMG US

Balaji Padmanabhan
Associate Dean for Strategic Initiatives
University of Maryland

AFERM #ERM26 AGA

2

AI Risk & Governance

Bajali Padmanabhan
University of Maryland

AFERM AGA

3

AFERM #ERM26 AGA

4

Today's AI (and Magic)

- Can do some amazing things because of brilliant engineering "under the hood" that makes it seem like magic!

AFERM #ERM26 AGA

5

What is Artificial Intelligence?

- Building machines that demonstrate (human) intelligence.
  - Turing Test
- What do humans do that could be considered intelligent?
  - (and how do we build machines that could do that?)

AFERM #ERM26 AGA

6

Demonstrating Intelligence: Then

AFERM #ERM26 AGA

7

Demonstrating Intelligence: Now

AI: Then and Now

- Use-cases look eerily similar, but under the hood it's night and day

**Learning from pre-programmed logic
VS
Learning from continuous, massive data
and new learning paradigms
MACHINE LEARNING**

A (Partial) Machine Learning Taxonomy

- **Supervised Learning, i.e. Predictive Models**
  - Decision Trees
  - Logistic Regressions
  - XGBoost
  - Neural Networks
  - Deep Learning
- **Unsupervised Learning**
  - Pattern discovery
  - Clustering algorithms

- **Self-Supervised Algorithms**
  - Learning by "filling in the gaps"
  - Modern Generative AI algorithms
- **Reinforcement Learning Algorithms**
  - Learning through experience, or trial and error

AI Foundation Models

Unlike traditional ML models, here you start with a generic "off-the-shelf" model and adapt to tasks.

Bommasani, Rishi, et al.
**"On the opportunities and risks of
foundation models."**
*arXiv preprint
arXiv:2108.07258*(2021).

A Trillion AIs,
Edge Cases,
Strategic AI Repositories
and
Perceptual Dexterity
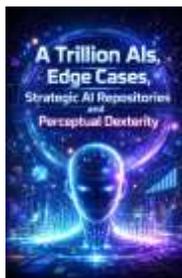
Meta's Yann LeCun to Launch
Physical A.I. Startup After
Declaring LLMs a 'Dead End'

1X Neo is a $20,000 home robot
that will learn chores via
teleoperation

Today's AI: The Good, The Bad, and The Ugly

14

The Good

- What capabilities of AI will we see translating into great ideas and products?

15

The Bad

- Lacks explainability, common sense reasoning and many other things we humans are (supposedly) good at
- Doesn't come with guarantees
- Has shown to be brittle
- Makes up stuff
- Can be biased
- Has high training and inference costs

16

The Ugly

- Can be used to generate dangerous content and applications
- Can have security flaws
- Has environmental impacts
- Potentially violates copyright
- Learning from human-generated data and insights over the years to potentially replace humans in some tasks
- Benefits the data and compute rich over the others

17

The Solution: AI Governance

But: Many Frameworks and Messaging Focus on Risks (Alone)

- "Governance refers to the processes, standards, and guardrails that help ensure AI systems and tools are safe and ethical"
  - IBM
- "Governance should be implemented at every stage of the AI lifecycle to manage AI risks effectively"
  - ISO/IEC 42001
  - AWS Security Blog
- Opportunity to broaden the design of tools and frameworks to maximize benefits while managing risk

18

Nine Issues that good AI Governance Needs to Address

1 | Verification architectures for AI use
- Ensuring correctness both of content as well as how it's used

19

Nine Issues that good AI Governance Needs to Address

2
Responsible and Fair Use
- Responsibility to all stakeholders, consistent with organizational values
- Embracing purpose, explainability, transparency and accountability where needed

AFERM
#ERM26
AGA

20

Nine Issues that good AI Governance Needs to Address

3
Effective design of (future) work
- Proactively thinking Human+AI architectures

AFERM
#ERM26
AGA

21

Nine Issues that good AI Governance Needs to Address

4
Ensuring planning for short and long-term horizons
- How does AI use impact future human skills and organizational capabilities?

AFERM
#ERM26
AGA

22

Nine Issues that good AI Governance Needs to Address

5
Managing and Governing Systems, Not Models or AI alone
- Value is created by systems not algorithms
- Attention on models + humans + processes

AFERM
#ERM26
AGA

23

Nine Issues that good AI Governance Needs to Address

6
Return on Investment and a Portfolio Strategy
- Importance of developing a portfolio of ideas/projects

AFERM
#ERM26
AGA

24

Nine Issues that good AI Governance Needs to Address

7
Regulatory Compliance
- Compliance (with regulations)
- Being on top of specific emergent legal concerns (copyright issues, contractual indemnification, patentability of innovations among others)

AFERM
#ERM26
AGA

25

Nine Issues that good AI Governance Needs to Address

8

Risk Management
- Data, security and privacy
- Managing for human gullibility for form over function sometimes
- Ensure red-teaming and adversarial preparation

AFERM   #ERM26   AGA

26

Nine Issues that good AI Governance Needs to Address

9

Vendor Management
- Ensuring AI products and services provided by AI vendors address the aforementioned eight issues

AFERM   #ERM26   AGA

27

Executive Certificate Program
MANAGING GEN AI RISK
Enabling Growth through Responsible Risk Management »

OVERVIEW

For decades, financial institutions have used Enterprise Risk Management (ERM) to help build and manage conventional predictive models. Recently, Generative AI tools have advanced such that leading institutions are embracing AI strategies, raising questions about the role of ERM and other control functions in achieving strategic objectives safely.

PROGRAM AT A GLANCE

- **Format:** In-person
- **Duration:** 2 days
- **Recurrence:** Quarterly*
  *Interested in a custom workshop? Contact Mary Bittie Rowntok (mbkowskc@vmd.edu)
- **Next Workshop:** March 26-27, 2026

AFERM   #ERM26   AGA

28