&PM BA 2024

Generative AI and business empowerment

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VP operation
IIBA Italy Chapter

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Agenda

14:00 – 18:00 PM&BA 2024: generative AI and business empowerment

14:00-14:30	**Welcome and President intro** a cura di IIBA Italy Chapter, *Michele Maritato, President IIBA Italy Chapter*
14:30-15:00	**AI or not AI?** *Letizia D'Apolito, volunteer* *Debora Dini, volunteer* *QA*
15:00-15:15	**Break**
15:15-16:15	**Generative AI (PMBA empowerment)** *Matteo Mercurio, volunteer* QA
16:15-16:30	**Break**
16:30 – 17:00	**Responsible AI** *Sergio Ceddia, VP Operation IIBA Italy Chapter*
17:00 – 17:45	**This is just the beginning** *Alessandro Curioni, presidente DI.GI. Academy SrL*
17:45-18:00	**Close and next steps** *Luigi Pantarotto, VP Marketing IIBA Italy Chapter*

Overfitting

classical problem of Machine Learning Algorithms, mainly when you're solving complex problems.

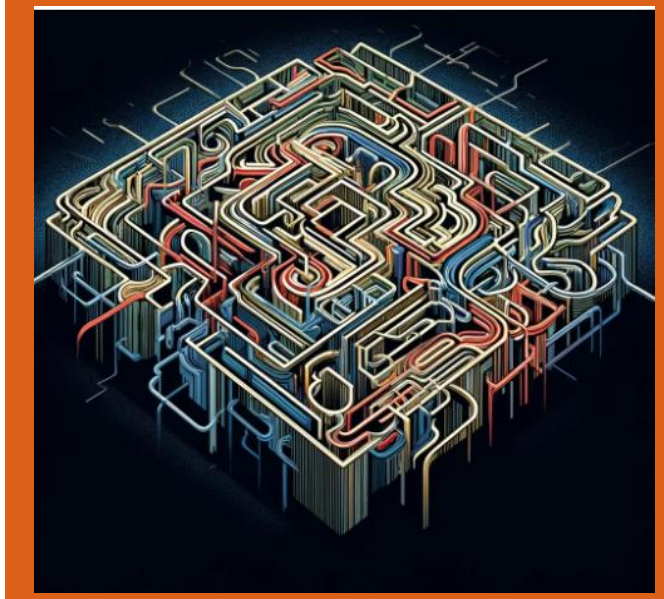
Example: When you study for IIBA exam, and you are focused on beautify the questions instead to focus on all techniques and requirement management.

Overfitting for generative AI

Example: In image recognition of dogs and the training set contains only dog in a garden, it could classify and learn the grass as characteristic of dog so could not recognize dogs inside an apartment.

For ML, you have a very good accuracy for the training set and very bad accuracy for the test set.

WHY ?
- Small Training data and don't have all scenarios
- Training data contains huge amount of irrelevant data (noise, rumors)
- ML model trained with a single dataset
- the complexity of model is high, so the model recognize the rumors.



How generative AI represents overfitting issue ...

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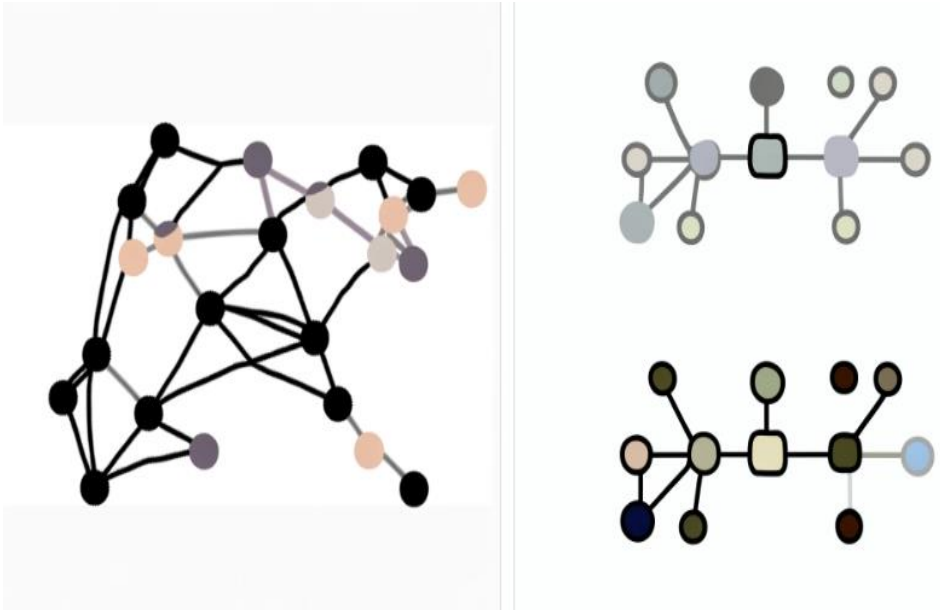
Underfitting

classical problem of Machine Learning Algorithms that can't determine relationship between data.

Example: When you want resolve a puzzle with a lot of pieces with different colors. If you take only blue pieces and green pieces, then you cannot complete the puzzle.
You have only a part of the image and you can't understand the entire picture.

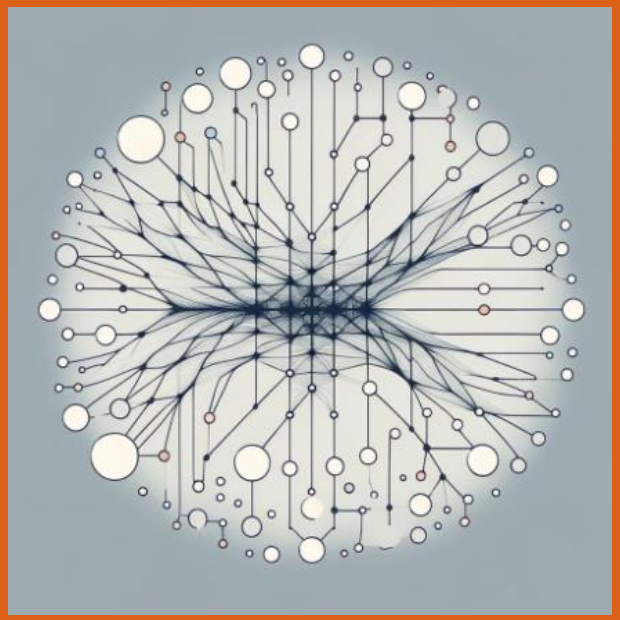


Underfitting for generative AI

Example: In image recognition of dogs and the training set contains only white dog so could not recognize black dogs and so on.

For ML, you have a bad accuracy for the training set and bad accuracy for the test set.

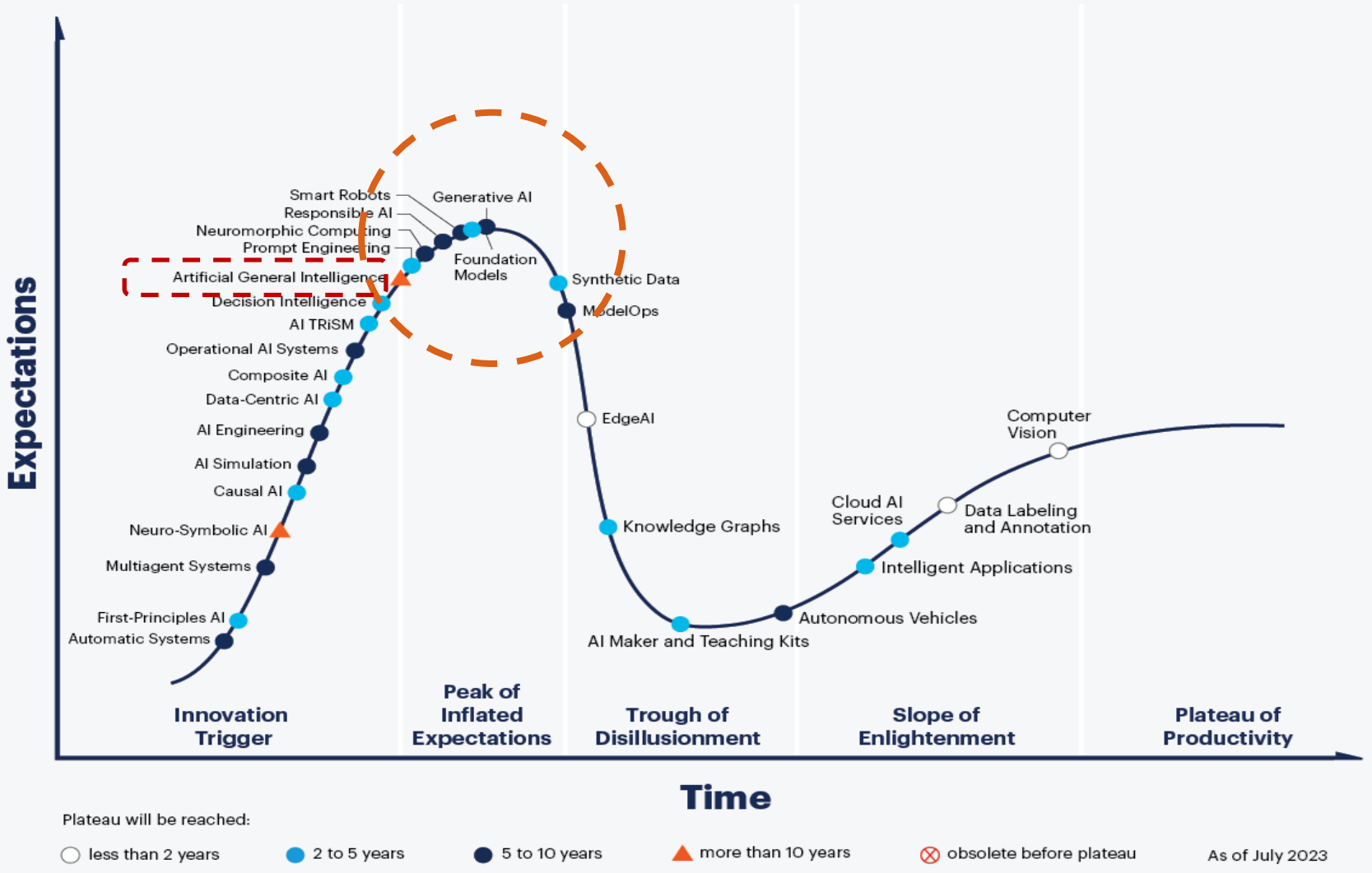
WHY ?
- Small Training data and don't have all scenarios
- Training data contains huge amount of irrelevant data (noise, rumors)
- ML model trained with a single dataset
- the complexity of model is high, so the model recognize the rumors.



How generative AI represents underfitting issue ...

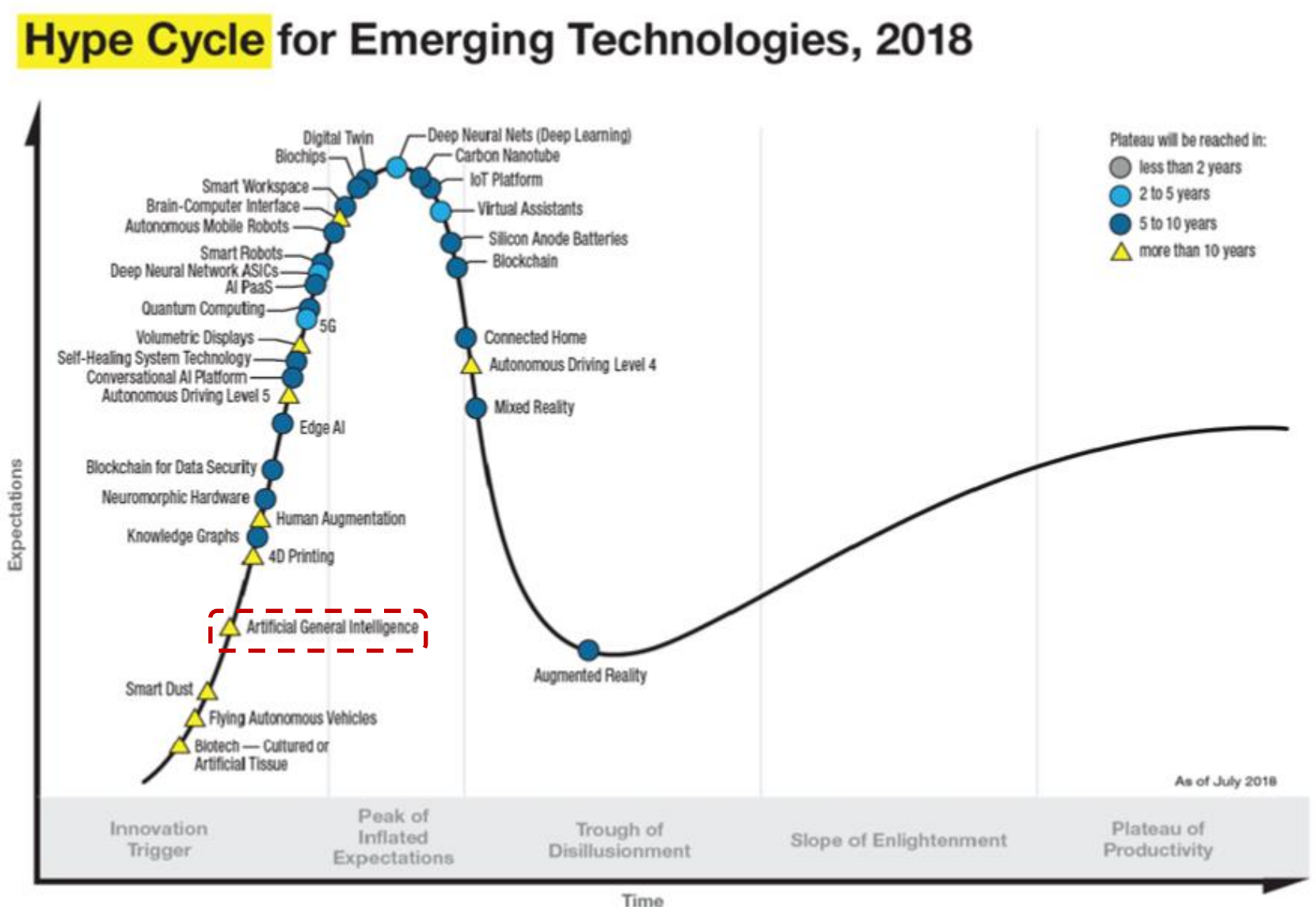
Hype Cycle generative AI

Representation of the maturity, adoption, and social application of specific technologies. How they are potentially relevant to solving real business problems and exploiting new opportunities. (Gartner)



Hype Cycle generative AI

In 2018 generative AI isn't present but …
Look AGI



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WHAT CAN DO PROJECT MANAGERS and BUSINESS ANALYSTS with AI ?

Predictive Analytics and Recommenders

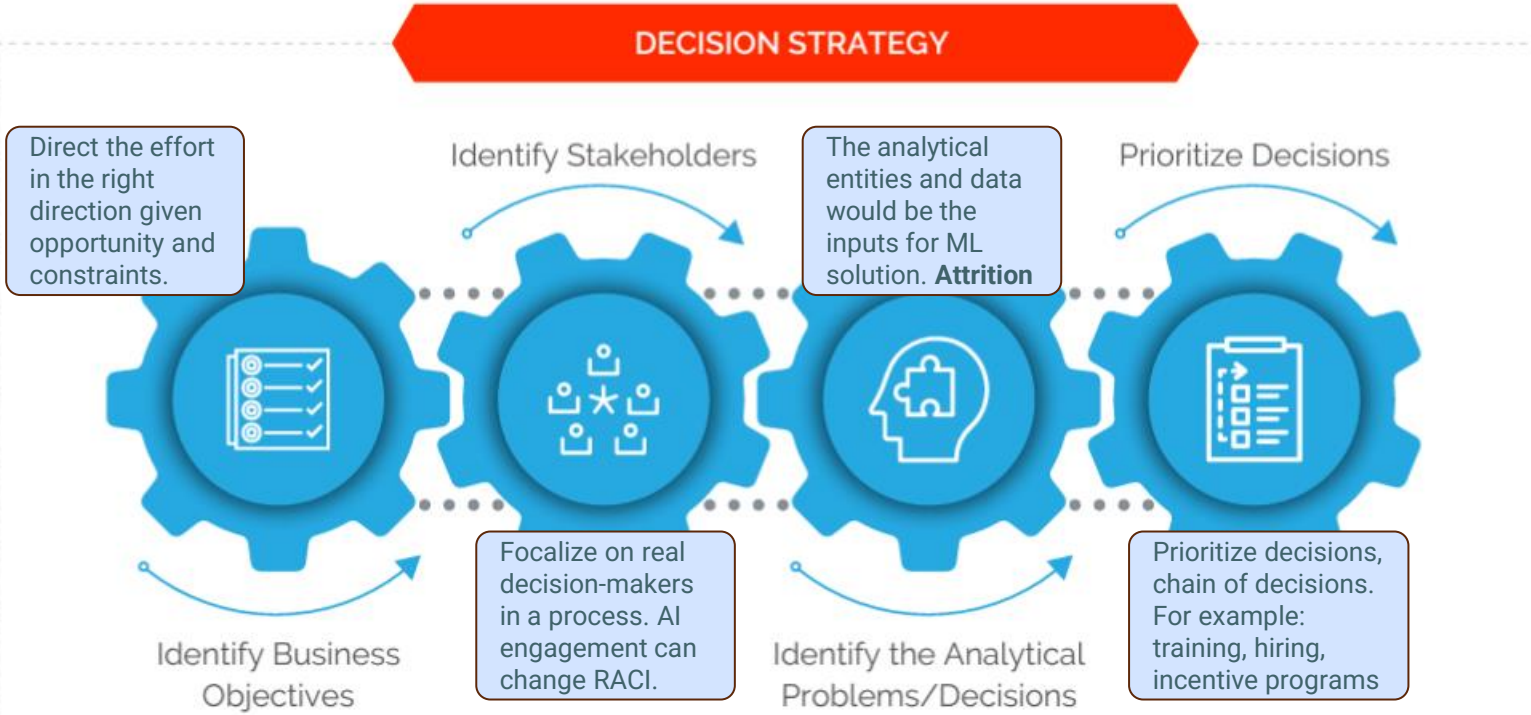
Image recognition, processing and diagnostics

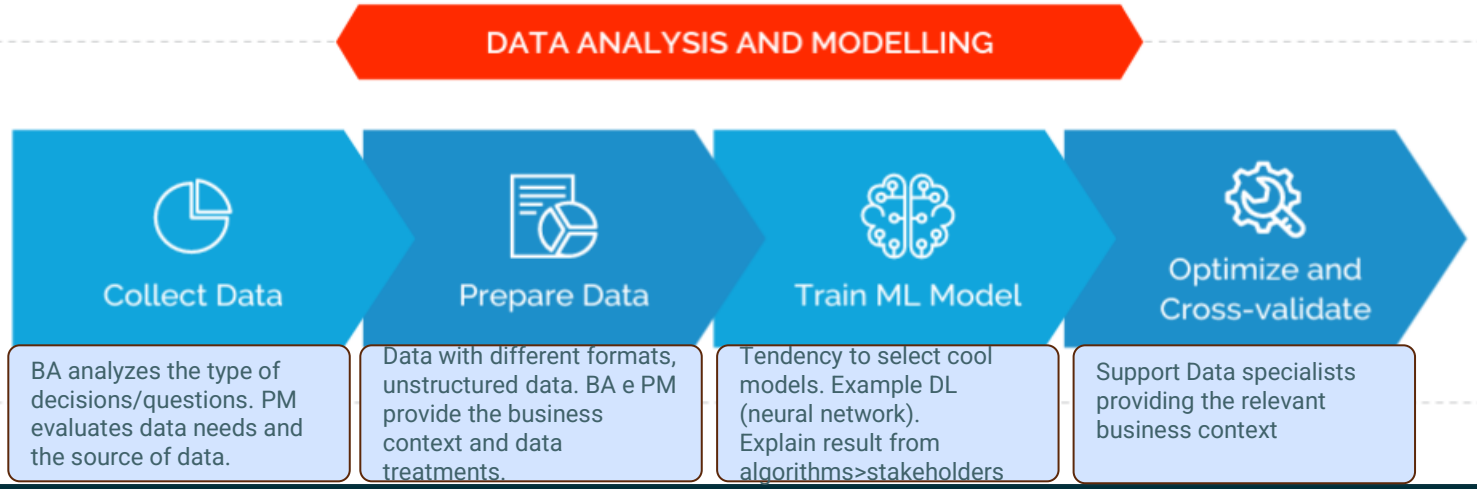
Chatbots and Voice Assistants

How business, stakeholder, and solution requirements need to be elicited, analyzed, and documented based on the technology chosen to implement a solution for a business situation.

(*Accelerating artificial intelligence with business analysis*)

Big picture framework ML engagement





Don't focus immediately on AI but it's important to understand what goal to achieve.

Data analysis and modelling phase
Collecting the right data, understand the story behind the data so select the right ML model (regression, neural network).

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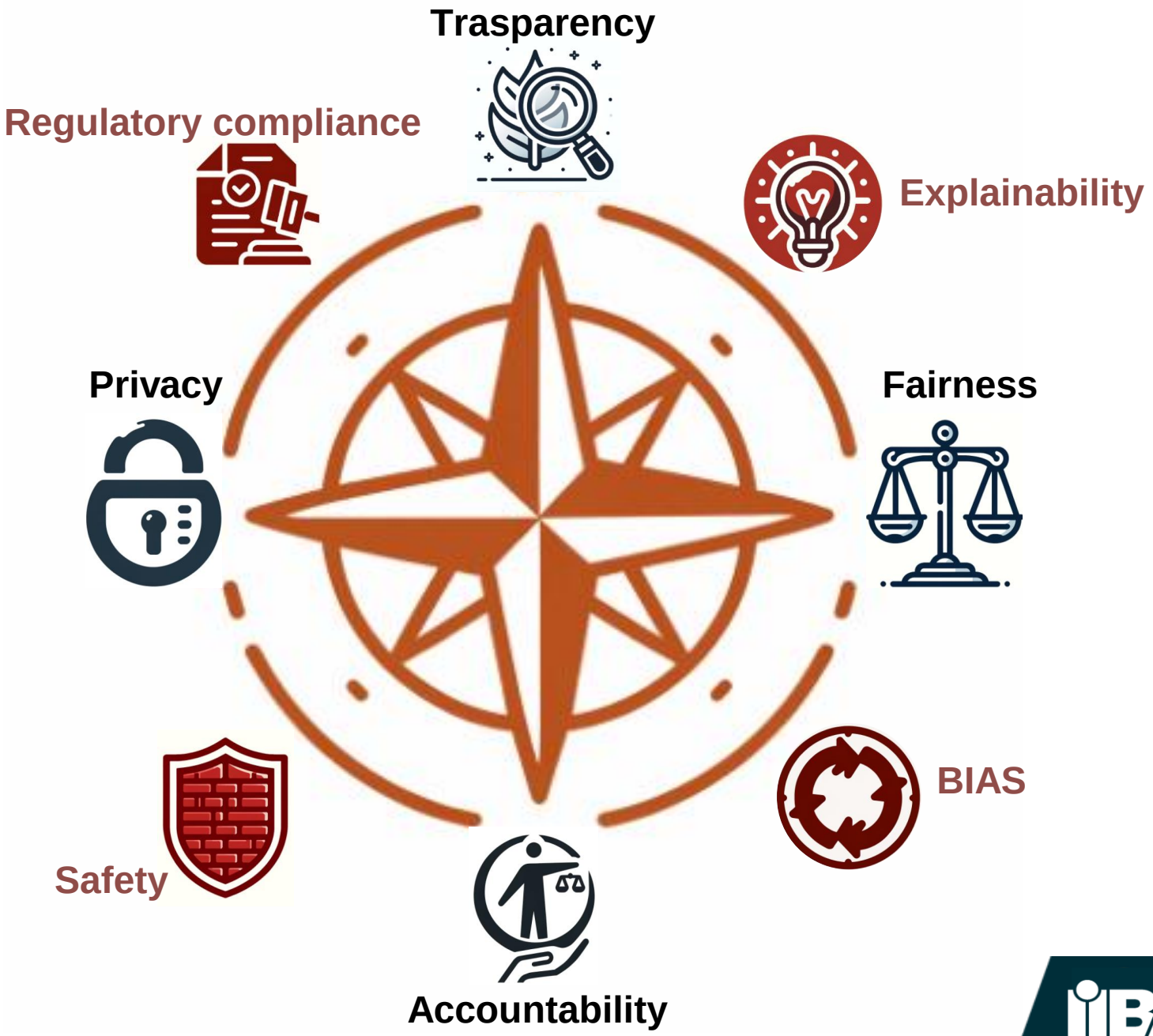
Responsible AI

Responsible artificial intelligence (AI) is an umbrella term for aspects of making appropriate business and ethical choices when adopting AI. (Gartner)

Responsible AI encompasses **organizational responsibilities** and practices that ensure positive, accountable, and ethical AI development and operation.



	Challenges	STRATEGIES
TRANSPARENCY Clarity and openness about how systems work, how they make decisions, and how they are trained.	**Challenges** Complexity (Neural networks), risk about Intellectual property and competitive advantage leak.	**STRATEGIES** - Clear documentation - Standards - third-party audits
FAIRNESS Ability of AI system to operate and make decisions without unfair bias or discrimination.	Data BIAS, complexity and black box (Neural networks), balance between performance-fairness.	- pre-processing data - update algorithms before or after processing
ACCOUNTABILITY Who is the owner and responsible of AI system?	black box (Neural networks) with decision processes not transparent, undetermination of responsability.	- audits - transparency - risk mitigation
PRIVACY Data protection, management of sensitive data.	Complexity of models (Neural networks), privacy violations, creation of deepfakes, false narratives, thought manipulations.	- Anonymization Techniques - Secure Architectures, - clear regulatory and policies - periodical audits

Definition

EXPLAINABILITY

Choose AI techniques that avoid the "Black Box“ and provide a human-understandable explanation of their results.

Challenges

- Deep neural networks are complex and not immediately intuitive to humans,
- trade-off Performance - Explainability.

STRATEGIES

- decompose model decisions into understandable items,
- documentation,
- training

Definition

Risks AI

BIAS

Bias in generative AI refers to biases or distortions in data or AI models that can lead to unfair or unethical results.

CHALLENGES

Training data underfitted.
Ethical issues, loss of trust.
Facing legal liability if their generative AI systems produce biased results that violate anti-discrimination laws.

STRATEGIES

- Diversification of Training Data
- Bias Analysis and Correction,
- Collaboration, transparency.

HALLUCINATION

Phenomenon where artificial intelligence systems generate outputs that are unexpected, meaningless/disconnected from the input data or the intended task.

- Quality output (unreliability)
- overfitting / underfitting
- Loss of trust and unsafety
- Ethical issues.

- Diversification and extension of Training Dataset,
- minimize overfitting issues,
- Rigorous testing and validation across wide range of scenarios.

Definition

from Responsible AI to ethical perspective

https://partnershiponai.org/

https://www.paolobenanti.com/blog

https://www.youtube.com/watch?v=vCtLUVQZ3Hw

I am generative AI

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THANK YOU!

VOLUNTEERS, MEMBERS and PM COMMUNITY!

to my fellow participants, your engagement and enthusiasm have been nothing short of inspiring. It is your questions, your ideas, and your commitment to ethical and responsible AI development that drive our community forward. The connections made here are invaluable, and I look forward to seeing how they evolve into future projects and partnerships.
As we leave this event, let us carry with us not only the knowledge we've gained but also a shared commitment to advancing generative AI in ways that are beneficial, ethical, and inclusive.
Thank you once again for a truly inspiring experience. I am eager to see what we will achieve together in the future.
Thank you all.“

Created from chatGPT - Generative AI

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