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Talks about #aiethics, #aiforgood, #womeninai, #aiinmedtech, and #aiinhealthcare

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Zühlke Group



EPFL (École polytechnique fédérale de Lausanne)



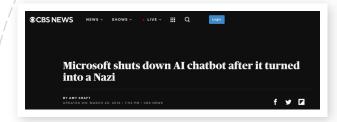
# Responsible Al

or: "How can we develop Al responsibly"

### Introduction







Lisa Falco



### Instagram 'pushes weight-loss messages to teenagers'

Researchers find minimal interactions by teen users can trigger a deluge of thin-body and dieting images



Instagram's algorithms are pushing teenage girls who even briefly engage with fitness-related images towards a flood of weight-loss content, according to new research which aimed to recreate the experience of being a child on

social networks.

These concerns are not merely about some hazy future consequences to AI bias. Organizations also cited real consequences realized from AI bias, too. A full 36% said their organization had suffered a negative impact due to an incident of AI bias in one several of their

Possible outcome: Poor customer experience, decreased revenues, increased cost, increased risk

- 62% reported lost revenue
- 61% lost customers

algorithms. Of those:

- 43% lost employees
- 35% incurred legal fees dues to lawsuits or legal action, and
- 6% experienced damage to brand reputation or a media backlash

https://www.informationweek.com/big-data/the-cost-of-ai-bias-lower-revenue-lost-customers

#### The New York Times

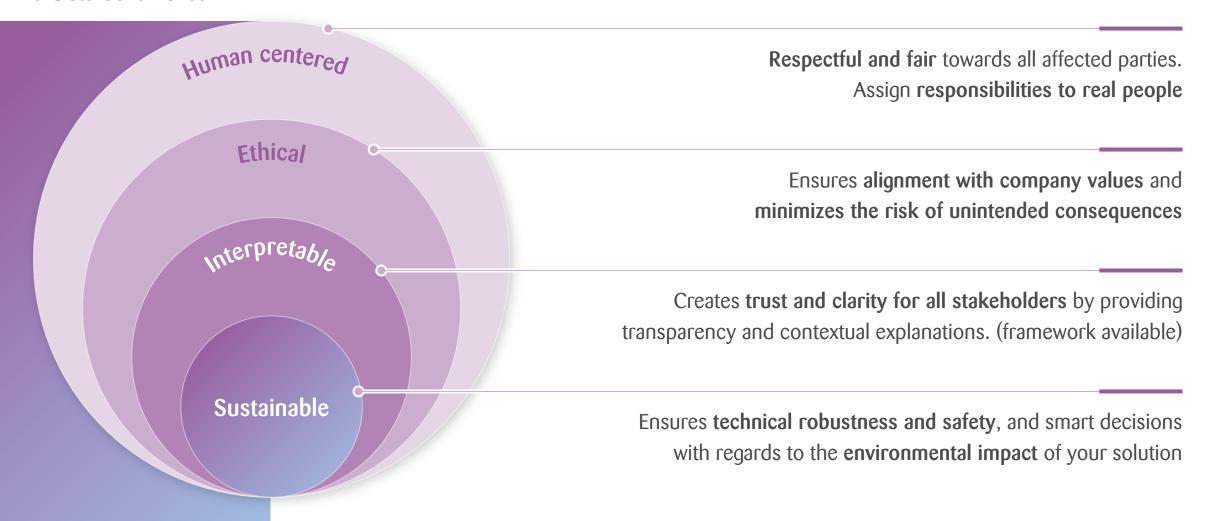
## Here's What Happens When Your Lawyer Uses ChatGPT

A lawyer representing a man who sued an airline relied on artificial intelligence to help prepare a court filing. It did not go well.

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### Core components of Responsible Al

Our framework is based on a long experience of developing AI under medical regulations & Data Governance

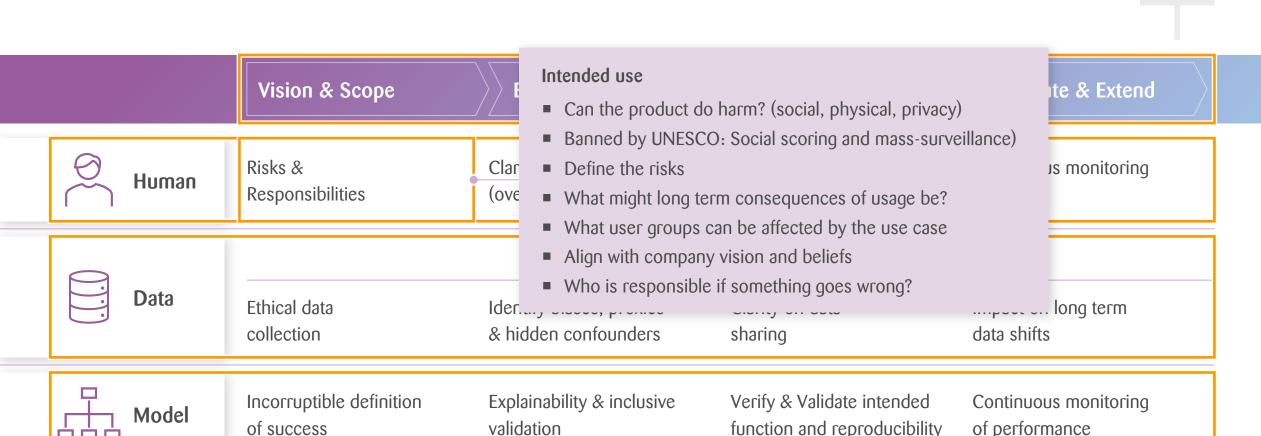


## Zühlke's Responsible AI Framework



	Vision & Scope	Evaluate & Prototype	Build & Operationalize	Operate & Extend		
Human	Risks & Responsibilities	Clarity on limitations (over-trust)	Transparency & respectful user interaction	Continuous monitoring of usage		
	Privacy					
Data	Ethical data collection	Identify biases, proxies & hidden confounders	Clarity on data sharing	Impact on long term data shifts		
Model	Incorruptible definition of success	Explainability & inclusive validation	Verify & Validate intended function and reproducibility	Continuous monitoring of performance		
	Environmental: Minimize computation necessity & chose a green cloud provider					
	General: Transparency (shared repositories) & documentation (design & decision making) that cannot be altered					

### Zühlke's Responsible AI Framework



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### How do you use the framework?

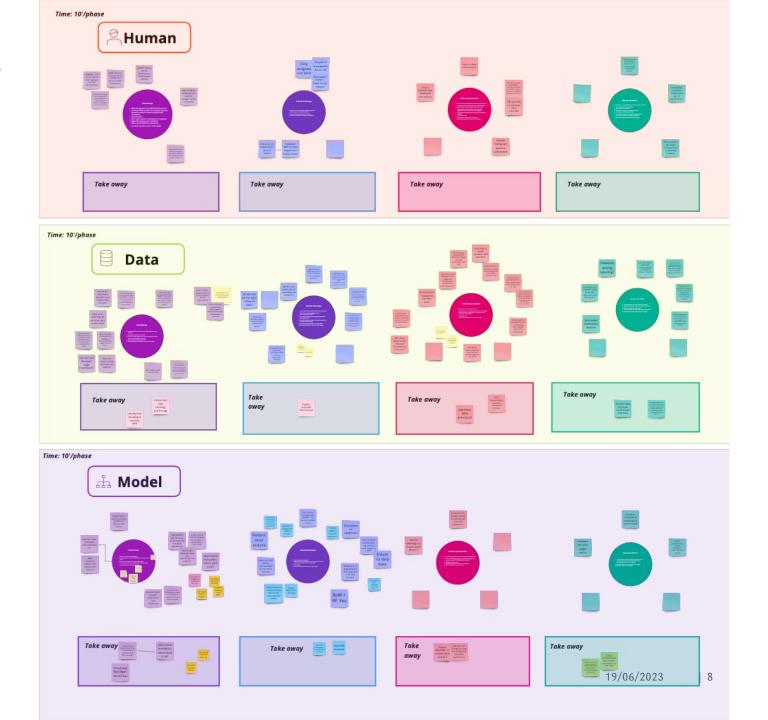
Interactive workshop format

### Case study:

Email triage of complaints for customer support

#### Setting:

- Conduct in groups
- Preferably diverse
- Moderation
- Favor discussion assign enough time



### Workshop outcome

Many unexpected potential issues that could lead to discrimination and bias.



# Upcoming EU regulations for AI

The EU AI Act is planned for end of 2023.

Risk-based and will resemble the medical device regulations (MDR).

Swiss companies acting in the European market will have to comply.



High risk

Limited risk

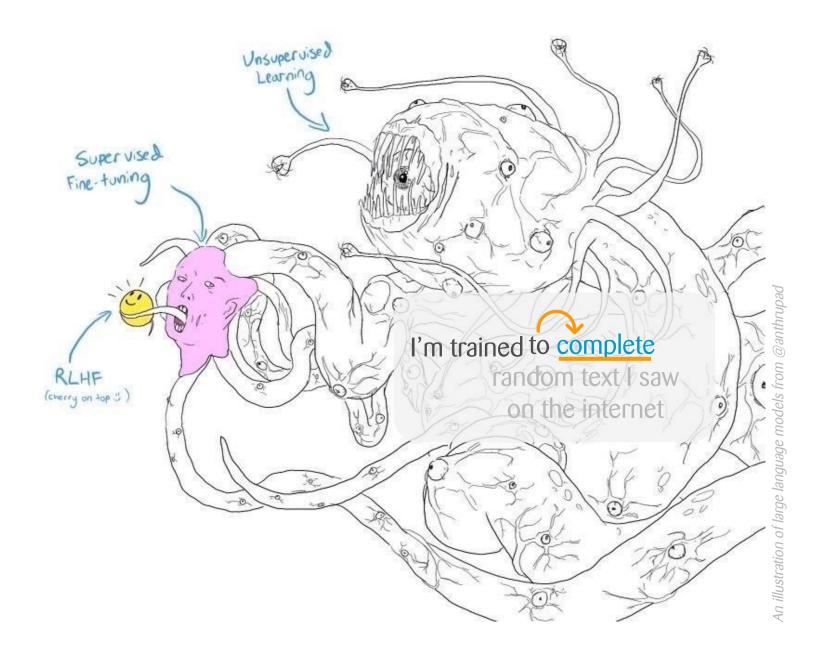
Minimal risk

# 01



## What about ChatGPT?

### Al Alignment



### Large Language Models Don't Know Things

Introducing your copilot for the web: Alpowered Bing and Microsoft Edge



\$679 million

\$3.04 billion



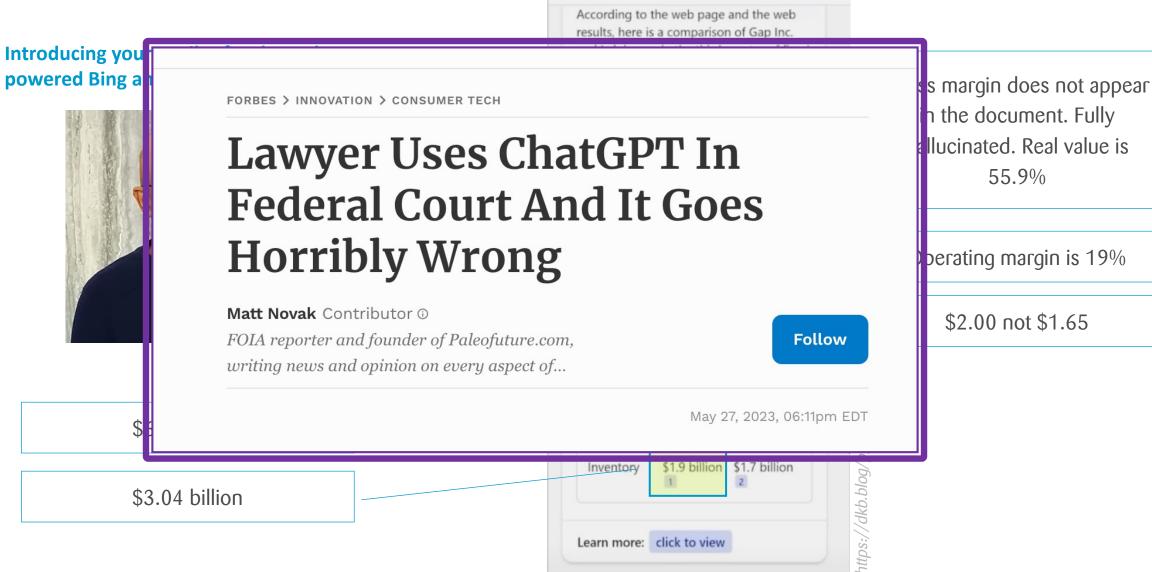
Gross margin does not appear in the document. Fully hallucinated. Real value is 55.9%

Operating margin is 19%

\$2.00 not \$1.65

### Large Language Models Don't Know Things





### Risks of Large Language Models



False Statements With High Confidence



Biased & Harmful Generations



Legal Uncertainties



Misuse

### Zühlke's Responsible AI Framework – Generative AI

What can you do to avoid the pitfalls when implementing generative AI.



	Vision & Scope	Evaluate & Prototype	Build & Operationalize	Operate & Extend		
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Human	Risks & Responsibilities	Clarity on limitations (over-trust)	Transparen user interac	cy & respectful	Continuous monitoring of usage	
Data	collection Trans	Newly added  Transparency requirements, like disclosing that the content was generated by AI, designing the model to prevent it from generating illegal content and publishing summaries of copyrighted data used for			Impact on long term data shifts	
Model	Incorruptible de design of success design				Continuous monitoring of performance	
		training.			e a green cloud provider decision making) that cannot be altered	

# Thank you!



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