

Artificial Intelligence (AI) and Natural Resource Management: The Road Ahead

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Webinar on Sustainable and integrated natural resource management: Values, principles, and requirements
10 September 2020

Research Collaborators



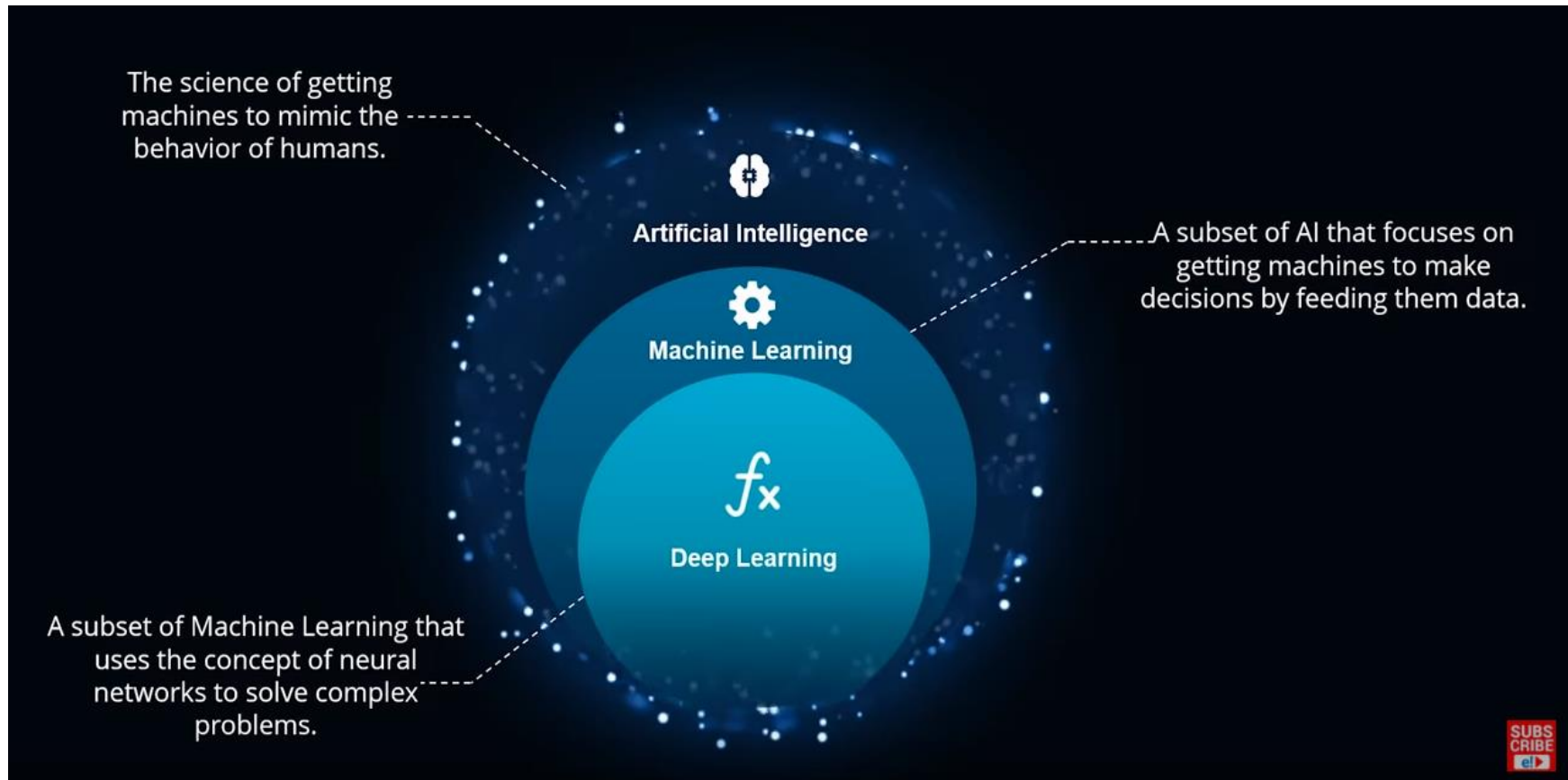
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What is AI?



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Source: <https://www.youtube.com/watch?v=oV74Najm6Nc>

Different Kinds of AI



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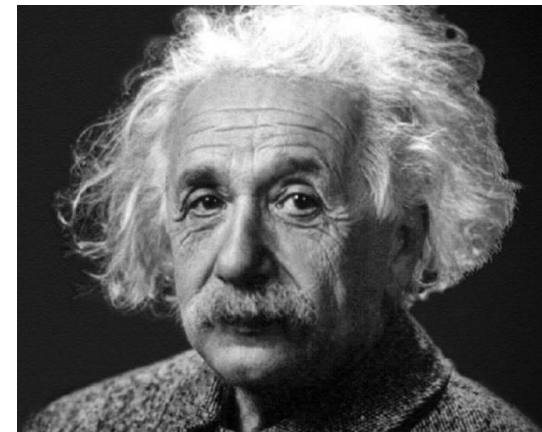
Narrow AI

- Aimed at performing a single task
- Can't really handle tasks and concepts it hasn't been explicitly taught before
- Most successful implementations of AI in resource sector thus far have been like this



Deep AI

- More faithfully mimics human intelligence
- Ability to learn and apply intelligence to solve any problem
- So far, thin evidence of serious breakthroughs like this happening within the resource sector



What Next for AI in the Resource Sector?



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- Domain-specific knowledge is still very important
 - **Human-centric AI**
- Current narrow AI applications are lacking contextual awareness
- Bigger breakthroughs in AI (and how more value will be delivered) will require tapping into deep technical knowledge of resource sector professionals, e.g., physical models



Image source: <https://towardsdatascience.com/what-does-human-centric-ai-mean-to-management-a56a50da1d6>

What Does This Mean?



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Image source:

<https://nightcruiser.com.au/act/canberra/wedding-tours/wedding-rings-2/>

- Silicon Valley (and other digital hubs) won't be able to make serious progress in AI on their own for the resource sector
- Example: it's unlikely that **Google** could unilaterally deliver anything other than Narrow AI to the energy or mining sectors
- Instead, they'll need to work with industry incumbents to tap into their domain-specific contextual knowledge

Thank you

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