AMA - MACHINE LEARNING

By

SUBHADITYA MUKHERJEE

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Resources

- github

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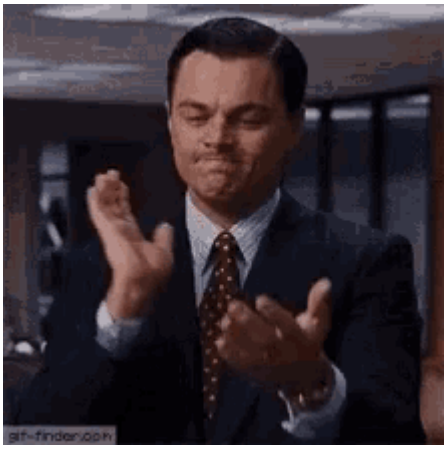
A lot of questions



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What makes me stay in this field?

- google
- deold
- sota

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Who is this session for ?

- Part 1 : For the ones starting the journey
- Part 2 : For the ones who are on the road
- Part 3 : For the ones walking a bit ahead

Note

- Pacing of today's talk
  - Most : Part 1
  - Rest : Part 2
  - Resources/Further questions : Part 3

Time

- Approx 1.5 hours

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What will you get if you stay

- An answer to the questions you asked me :)
- Why should you care about Machine Learning?
- A roadmap into your Machine Learning career
- How can you use Machine Learning in your projects ... should you??
- Advanced questions on specific topics!

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How to make the most of this session?

- Take what you need
- BE INSPIRED not AFRAID
- This will be provided
- Futher questions : Contact
- Relate with what you know

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Part 1 : For the ones starting the journey

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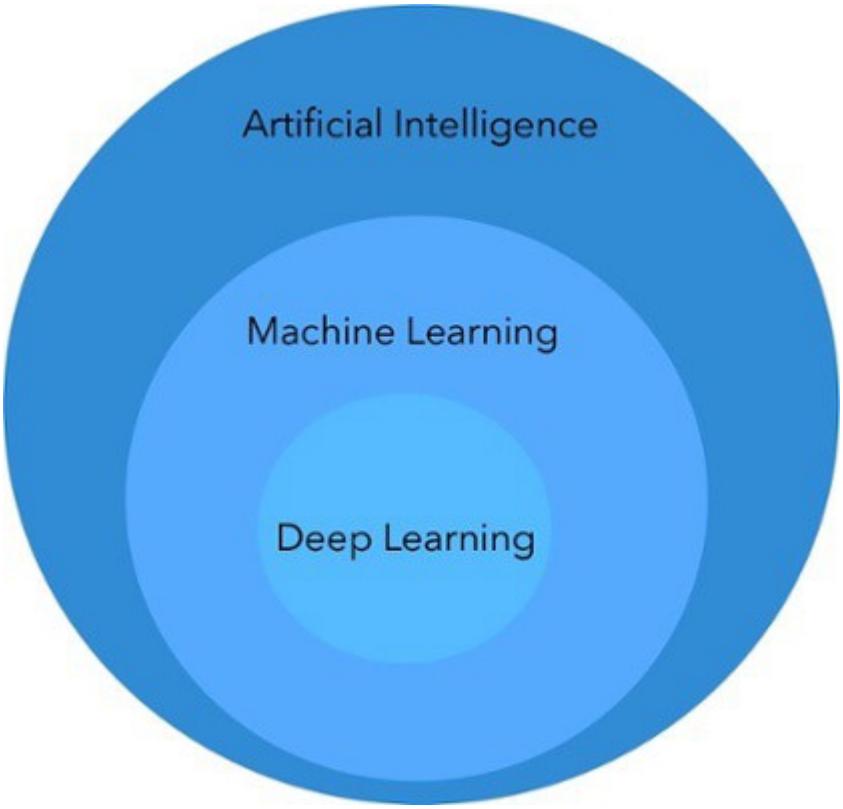
AI vs ML vs DL



@Roberta Nicora

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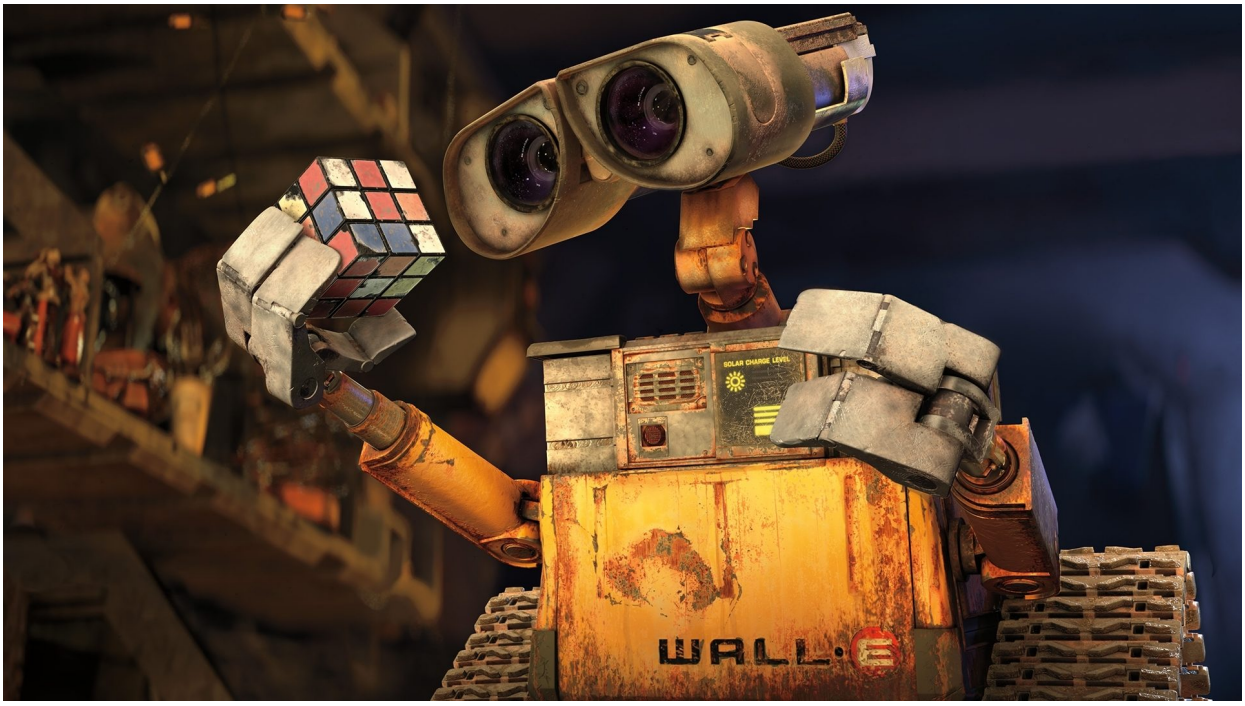
Will machines replace humans?



@pixar

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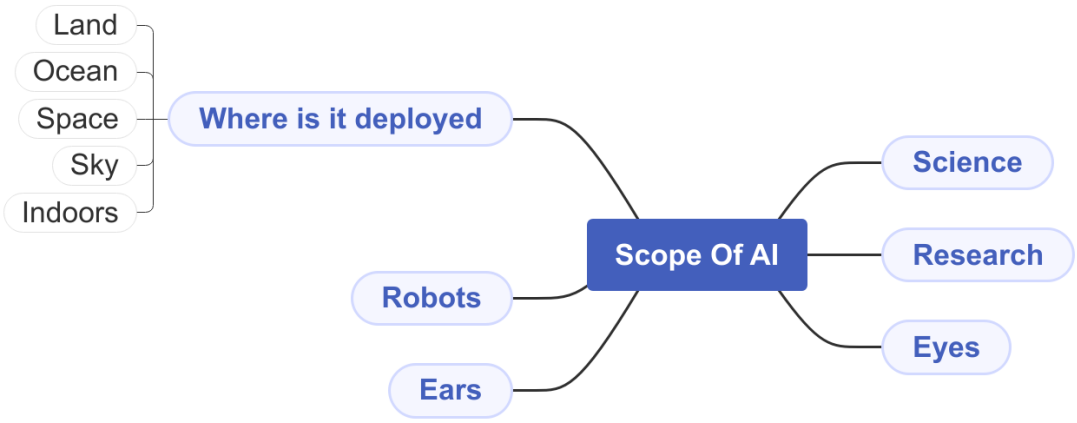
Scope of AI



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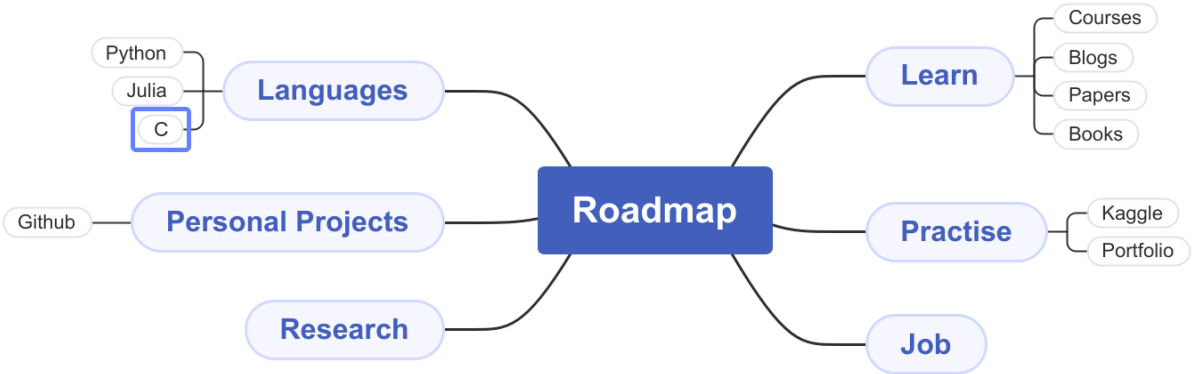
How can we start our career in it?



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Do I need to be a Math Genius?

$$\frac{\partial C}{\partial w^L} = \frac{\partial z^L}{\partial w^L}\frac{\partial a^L}{\partial z^L}\frac{\partial C}{\partial a^L} = \underbrace{a^{L-1}\sigma'(z^L)\overbrace{(a^L - y)}^{\text{delta}}}_{\text{tmp}}$$

$$\frac{\partial C}{\partial a^{L-1}} = \frac{\partial z^L}{\partial a^{L-1}}\frac{\partial a^L}{\partial z^L}\frac{\partial C}{\partial a^L} = \underbrace{w^L\sigma'(z^L)(a^L - y)}_{\text{new delta : w^L * tmp, and NOT w^L * delta}}$$

$$\frac{\partial C}{\partial w^{L-1}} = \frac{\partial z^{L-1}}{\partial w^{L-1}}\frac{\partial a^{L-1}}{\partial z^{L-1}}\frac{\partial C}{\partial a^{L-1}} = \underbrace{a^{L-2}\sigma'(z^{L-1}) \times \overbrace{w^L\sigma'(z^L)(a^L - y)}^{\text{new delta}}}_{\text{new tmp}}$$

@https://stackoverflow.com/questions/53287032/multi-layer-neural-network-back-propagation-formula-using-stochastic-gradient-d

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NO

The Misconception

- Knowledge
- Companies

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How useful are competitions and hackathons?

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How do I find problems to solve? How do I know that they can be solved with ML?

@bored panda

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What can I do as someone without experience?

- fastai

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Challenges and impact of AI in third world countries

- Health : Filter
- Industry : Efficiency
- Research Scope

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Part 2 : Hustling

@economic times

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NLP

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Medical

- kaggle

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Satellite Imagery

- kaggle

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Automotive

- Driverless
- Lex

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PART 3 : Further

@outreach magazine

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Generalizing models

- Transfer learning
- paper

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Security issues

- fed

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MLOps

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Real Time Machine learning

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Thank you :)