A live webinar from Leafcutter

AI for nonprofits
My introduction to AI
What we will cover

1. What is AI?
2. NFPs and AI
3. How to get started
What is AI?
Defining AI today

AI stands for Artificial Intelligence
Also known as Machine Learning

My definition:
a broad set of mathematical techniques employed at scale that simulate or surpass aspects of human intelligence (mainly pattern matching)
Why is AI so popular now?

Figure 1. Hype Cycle for Artificial Intelligence, 2018

Source: Gartner (July 2018)
I have not failed. I've just found 10,000 ways that won't work.
Probability vs determinism
Deep learning

1980s-ERA NEURAL NETWORK

Input layer
Hidden layer
Output layer
Node

Links carry signals from one node to another, boosting or damping them according to each link's 'weight'.

DEEP LEARNING NEURAL NETWORK

Input layer
Multiple hidden layers process hierarchical features
Output layer

- Identify light/dark pixel value
- Identify edges
- Identify combinations of edges
- Identify features

Identify combinations or features

Input: 'George'

Leafcutterer
What today’s AI can do

- Can recognise voice and text
- Can classify images (even in video)
- Can recommend movies, choices etc
- Can simulate various scenarios and outcomes
The pinnacle of AI achievement
What AI can’t do (today)
Today’s AI is really great at solving narrow problems at scale
Solving nonprofit challenges
Putting challenges in 2 baskets

Common challenges
- Automating customer service
- Image & video recognition
- Transcribing audio/video
- Fundraising campaigns
- Improving operations

Unique challenges
- Creating a unique supporter experience
- Research
- Improving service delivery
Automating customer service
Image & video recognition
Transcribing audio and video

Automate for Efficiency with Amazon Transcribe and Amazon Translate

Niranjan Hira – AWS Solutions Architect
April 2018

Why Companies are Switching from WebEx to Zoom

that's wonderful wonderful question
19:53
I think that you know the way we look at this is we got to make sure our employees very happy
19:53
If employees very happy we are going to work very hard to deliver happiness to our customers
20:05
In terms of product innovation and customer support
20:05
And also business model interaction between our sales and customers and so on so forth
20:14
That's really important
20:15
The company culture is number one thing right
20:15
So number one is make sure be paranoid
20:21
I don't assume you have best product I take rivals as example
Fundraising campaigns

Thanks, Beth. There is so much that needs changing. Missio is making a difference. Take a look at this video.

Missio helps mothers feed their children so they can live a healthy life. Sends girls and boys to school because too many are denied their potential. And brings comfort to those fleeing persecution and civil war.

Beth, I’d like to tell you about someone whose world we are helping change!
Improving operations (CRM, Finance, etc)
Creating a unique supporter experience
Research
Improving service delivery
How to get started
You still need...

Good people

Good data
Choosing challenges to solve

1. List your organisation challenges and priorities
2. Identify areas for automation (low hanging fruit)
3. Identify areas where you have data but don’t have insight (unique challenges)
4. Identify areas where you could offer an interactive experience (unique challenges)
5. Rank them according to problem scope, understanding of the problem, data volume & quality, and human resources available
The structure of an AI Project

1. Define the problem and hypothesis
2. Gather and clean the data
3. Train POC model from test data
4. Compare POC model to existing solutions
5. Refine and implement MVP
6. Continually monitor and retrain as required in production

NOTE: AI projects have probabilistic outcomes
Technology tools

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<thead>
<tr>
<th>Cloud Platform</th>
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<tbody>
<tr>
<td>Google Cloud Platform</td>
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<td>Azure</td>
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<td>Amazon Web Services</td>
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<td>IBM Watson</td>
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Wrapping up
Takeaways

1. AI is not a silver bullet - its good for solving narrow problems at scale
2. AI is happening - just not overnight
3. You need good process, good people and good data
4. People still need to work with the AI. You need to be able to tell the AI the problem to solve and ‘supervise’ its learning.
Thank you

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