



AI FOR NONPROFITS: From Theory to Practice -

Understanding Considerations & Unlocking Impact

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Kaitlin (she/her) is a data scientist at Tech Impact's Data Innovation Lab where she leads data science and engineering projects for social good. The Lab partners with nonprofit, government, and industry organizations across many diverse domains on data related projects for the betterment of communities.



LEARNING GOALS

1. Understand different types of AI models and what they can do
2. Be able to factor in ethical considerations when utilizing AI
3. Practice applying AI to a problem your organization is facing

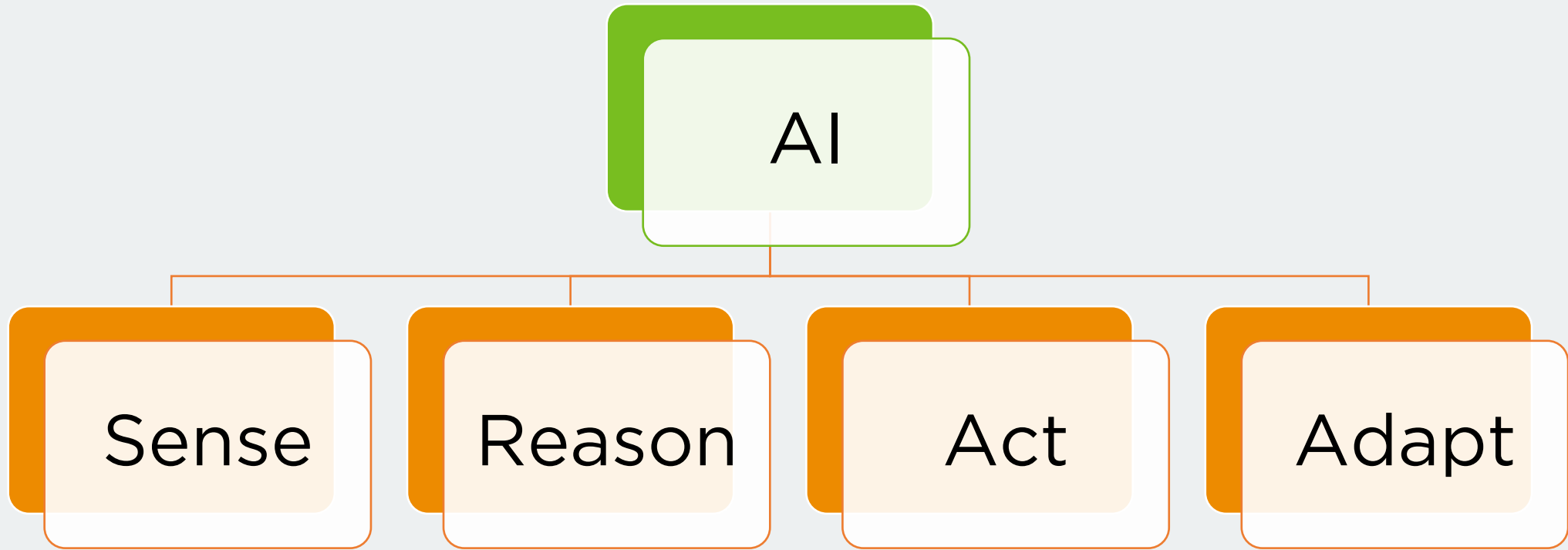


AGENDA

1. Introduction of AI
2. AI use cases in the nonprofit world
3. Ethical considerations
4. Try it yourself!



INTRODUCTION TO AI



AI includes...

Machine
learning (ML)

Neural
networks

Deep learning

Generative
models

Large
language
models (LLM)

Natural
language
processing
(NLP)

Robotics

Computer
vision

AR/VR

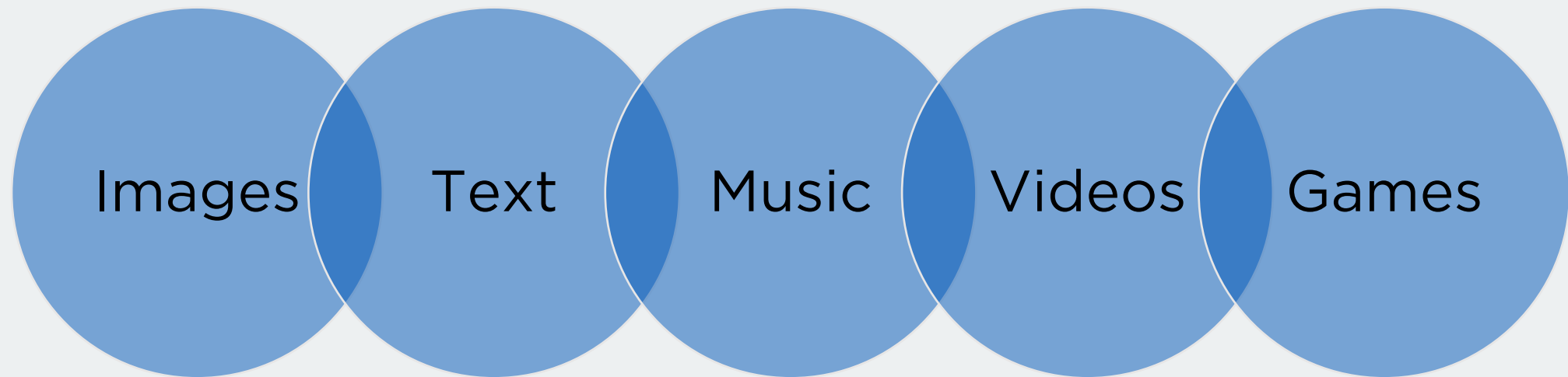
ML Tasks

- Classification
- Regression
- Clustering
- Forecasting
- Association
- Reinforcement learning
- Dimensionality reduction
- Generative models



- Predict
- Make inferences
- Identify patterns
- Make decisions

Generative models generate...





AI + NONPROFITS

Applications & Use Cases

How can nonprofits use AI?

Fundraising

- Create fundraising campaigns and target donors

Communications

- Generate email templates to donors, funders, stakeholders, etc.

Enhance accessibility

- Speech to text, text to speech, closed captioning, object recognition

Risk/fraud detection

- Predict whether a donation request or other activity is fraudulent

Personalize content

- Create chatbots to give personalized recommendations and content to users

Plan events

- Automate tasks, generate an agenda and marketing content, track RSVP's, etc.

How *are* nonprofits using AI?

International Fund for Animal Welfare

- AI detects illegal wildlife trade through pictures

Red Cross

- Clara chatbot gives personalized information about disaster response, donating, training opportunities, & more

The Trevor Project

- Personalized chatbot helps LGBTQ+ youth navigate mental health crisis

UNICEF

- Deep learning on images helps detect risk for malnutrition in children in areas with limited resources and access

World Wildlife Fund

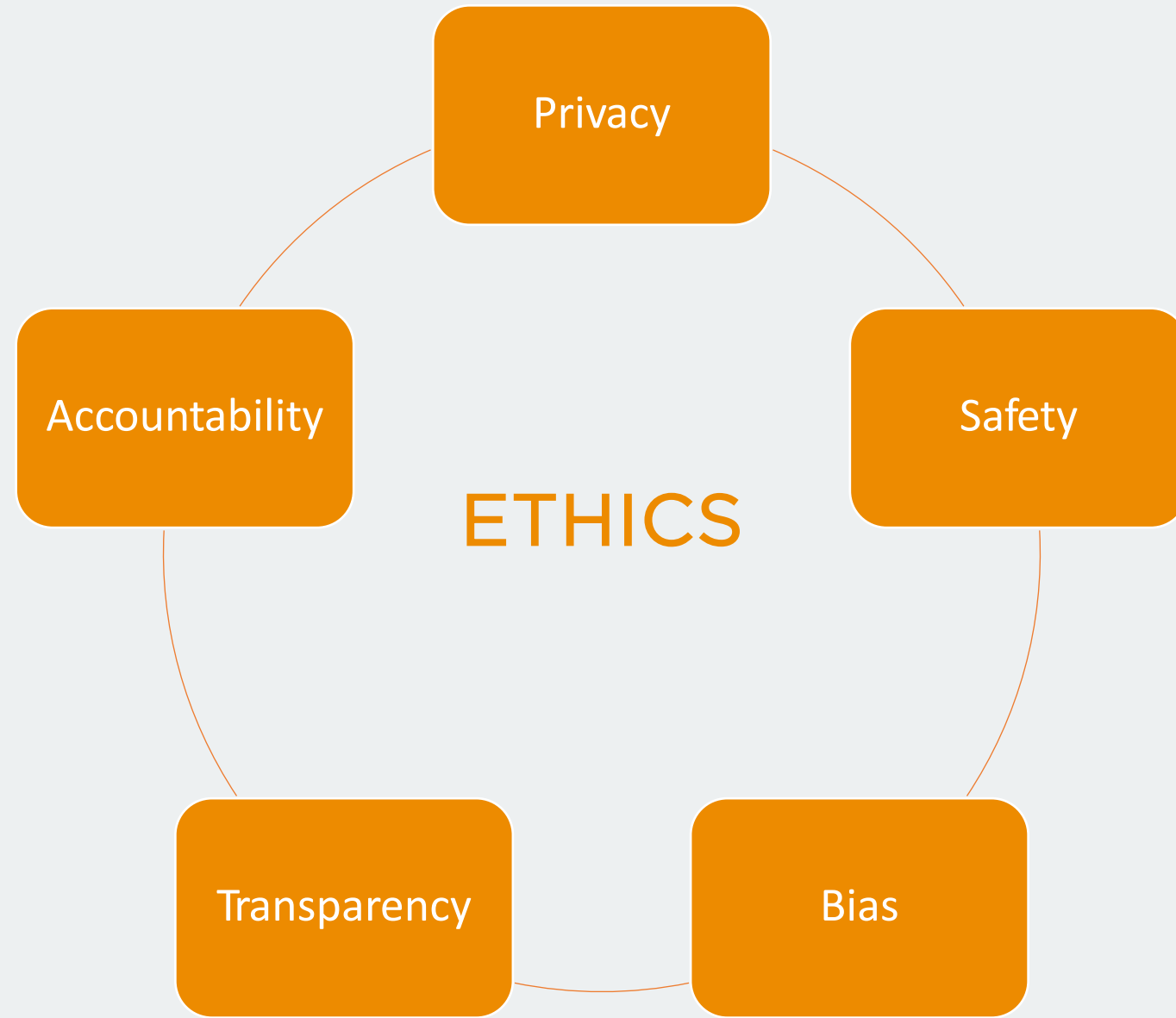
- Generate images of the potential destruction caused by climate change to spur action and increase awareness

Doctors Without Borders

- Developing an app to help healthcare workers diagnose antibiotic resistance through image processing and AI algorithms



ETHICAL CONSIDERATIONS



AI isn't always reliable...

- NY attorney cited cases that were made up by ChatGPT
- Australian mayor falsely accused of criminal history by ChatGPT
- ChatGPT falsely stated a Georgia radio host had been accused of fraud and embezzlement

Algorithms with underlying bias
can perpetuate social and historical biases.

Asking Google's Bard for examples of bias in AI:



Sure, here are some examples of biased AI:

- **The COMPAS algorithm:** COMPAS is a risk assessment tool used to predict the likelihood of a defendant reoffending. The algorithm has been found to be biased against black defendants, who are more likely to be classified as high-risk and sentenced to prison.
- **Amazon's hiring algorithm:** Amazon's hiring algorithm was found to be biased against women. The algorithm was trained on data from previous hires, which was mostly male. As a result, the algorithm was more likely to recommend male candidates for open positions.
- **Google's photo tagging algorithm:** Google's photo tagging algorithm was found to be biased against black people. The algorithm was more likely to misidentify black people in photos, and it was also more likely to label black people as criminals.
- **Microsoft's Tay chatbot:** Tay was a chatbot developed by Microsoft that was trained on social media data. Tay quickly learned to produce racist and sexist tweets, and it was taken offline after just 16 hours.

These are just a few examples of biased AI. Bias can be introduced into AI systems in a number of ways, including:

- The data that is used to train the AI system is biased.
- The algorithms used by the AI system are biased.
- The people who develop and deploy the AI system are biased.

Bias in AI can have a number of negative consequences, including:

- Discrimination against certain groups of people.
- Unfair decisions being made.
- The spread of misinformation.

It is important to be aware of the potential for bias in AI systems and to take steps to mitigate it. This can be done by using unbiased data, developing unbiased algorithms, and having a diverse team of developers and deployers.

| AI algorithms are typically trained on real data.

You ask an AI
tool a question
with context



Tool gives you
an answer



Tool uses this
interaction as
new training
data

Privacy Concerns

- Confidential company information can be put at risk
- Intellectual property may be used by algorithms

AI Tools: What You Should Know

- Private policy
- Last update of the tool
- Consider that answers may not be accurate
 - Check sources yourself!
- Have a clear purpose
- Never use confidential information like passwords or sensitive data



ACTIVITY

ACTIVITY

ChatGPT : <https://chat.openai.com/>

Bard : <https://bard.google.com/>

1. Think about a problem or repetitive task you've experienced in your organization
2. Work with 1-2 other people to explore how an AI tool can help
3. What do you notice about the response? What changes would you make?

Example:

"Write an AI usage policy for my tech nonprofit company"





THANK YOU!



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