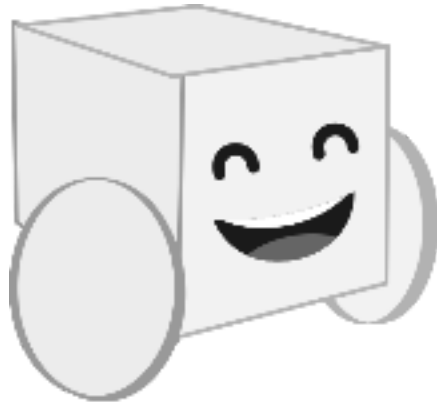


# Student Workbook Pages

## How to Train Your Robot Companion

Developed by the MIT Media Lab & i2 Learning



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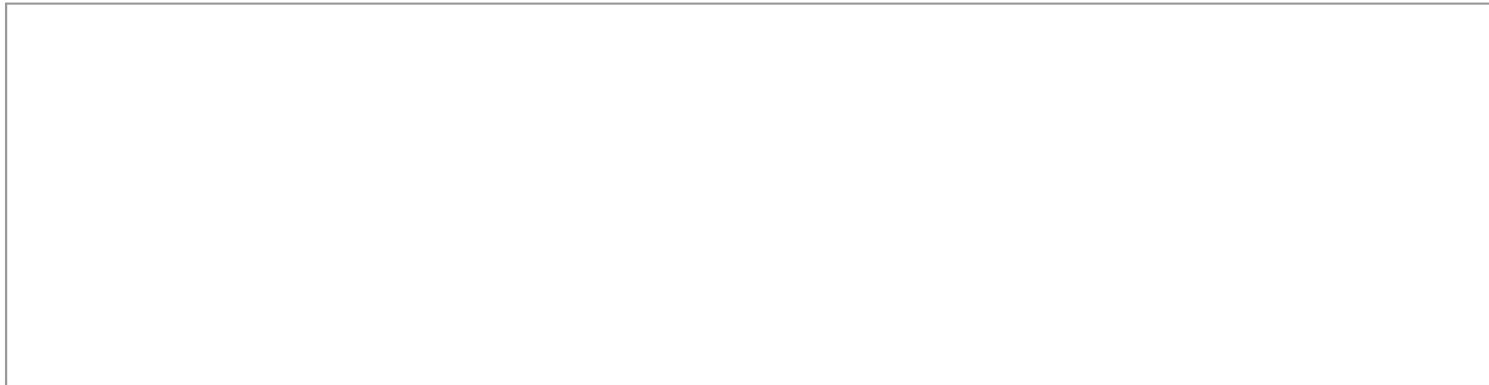
## Day 1: What is technology?

Technology is \_\_\_\_\_ made by \_\_\_\_\_  
(noun) (noun)

in order to \_\_\_\_\_  
(verb)

### Draw me!

What do you think technology is?



Good things technology can do

- 
- 
- 

Bad things technology can do

- 
- 
-

## Day 1: What is AI?

AI is \_\_\_\_\_ made by \_\_\_\_\_  
(noun) (noun)

that \_\_\_\_\_  
(verb)

### Draw me!

What do you think AI is?



Good things AI can do

Bad things AI can do

- 
- 
- 

- 
- 
-

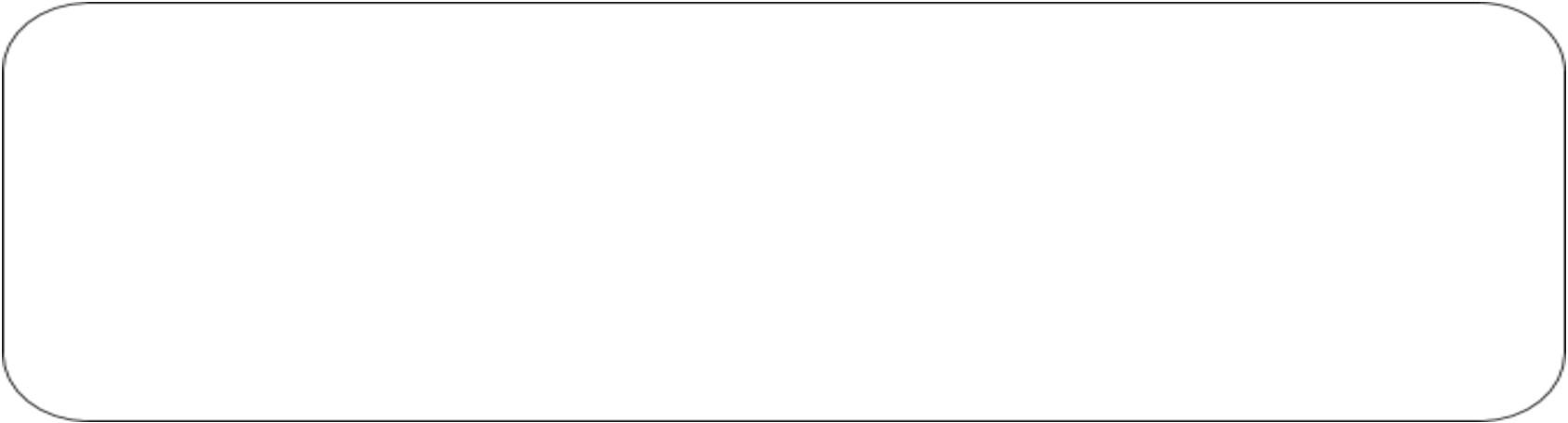
## Day 1: Ethical Reasoning

Stakeholders	1st Area of Interest: _____	2nd Area of Interest: _____	3rd Area of Interest: _____

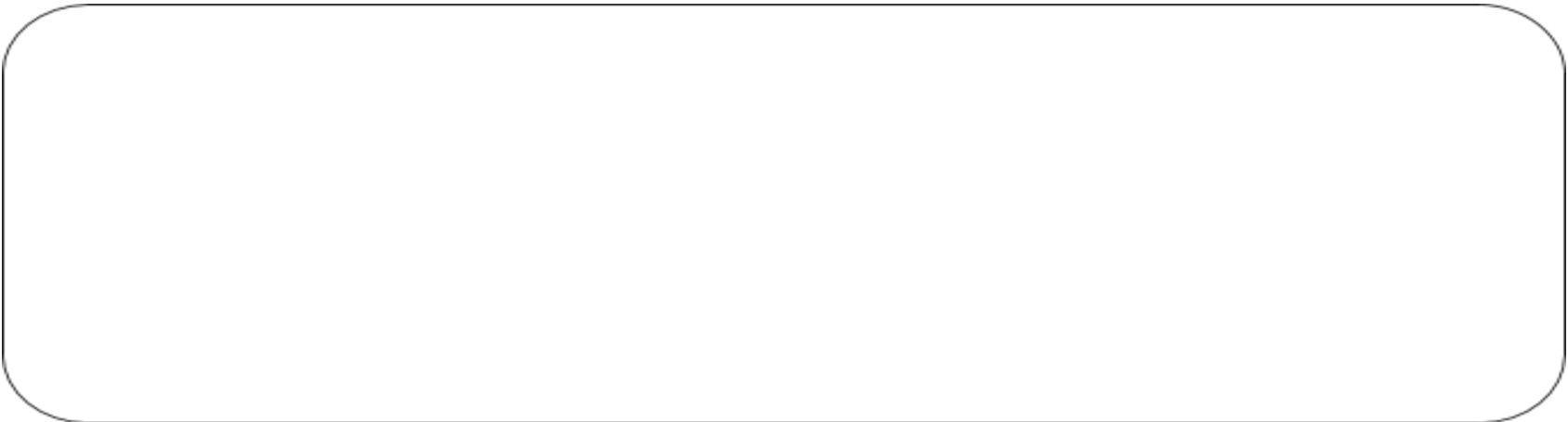
Outcomes	Pros	Cons
<ul style="list-style-type: none"><li>•</li><li>•</li><li>•</li><li>•</li></ul>		

## Day 1: Reflection

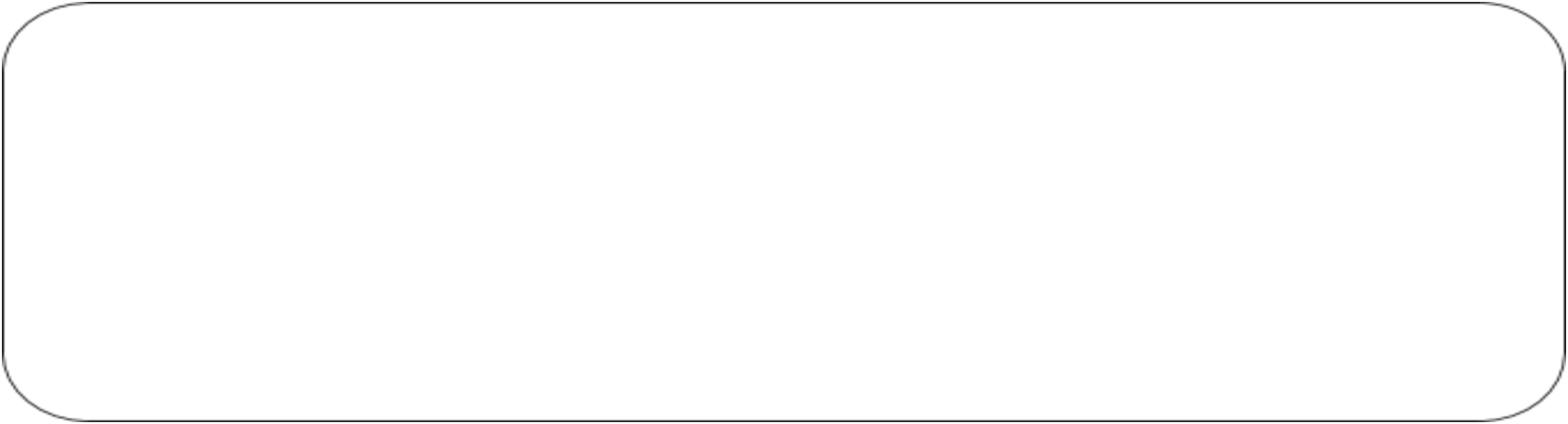
What is one thing you learned about AI today?



What are some ways AI can be **helpful**?



What are some ways AI can be **harmful**?

A large, empty rounded rectangular box with a thin black border, intended for writing answers to the question above.

What is one question you have about AI?

A large, empty rounded rectangular box with a thin black border, intended for writing answers to the question above.

## Day 2: PB&J Sandwich Activity

Write an “algorithm” to make a Peanut Butter and Jelly sandwich:

a) What *input data* (or ingredients!) do you need?

b) Write out the steps in your algorithm:



## **Day 2: Teachable Machine Activity**

**(a) For the dog training dataset, record the following:**

**How many images are included?**

**How are the images similar?**

**How are the images different?**





**(b) For the cat training dataset, record the following:**




**How many images are included?**

**How are the images similar?**

**How are the images different?**

Once your classifier is finished, test your dataset with cards given to you containing the following image. Fill in the table on the next page about your testing dataset:

Image	Classification	Confidence Score	Correct?
			
			
			
			

 <p>©Warren Photography</p>			
			
			

**Which class did your classifier work better on? (Circle one)**

**Cats**

**Dogs**

**Why do you think that is?**

**With your group, use the photos on the tables to re-curate your training dataset. Record the following:**

- A. For the dog training dataset, record the following:**
  - a. How many images are included?**
  
  - b. How are the images similar?**
  
  - c. How are the images different?**

**B. For the cat training dataset, record the following:**



**a. How many images are included?**

**b. How are the images similar?**


**c. How are the images different?**

**Train your new classifier on your two new training datasets.**

**Once your classifier is finished, test your dataset with cards given to you containing the following image. Fill in the table on the next page about your testing dataset:**

Image	Classification	Confidence Score	Correct?
			
			



			
---	--	--	--

Did your new algorithm work... (*circle one*)

**Better for dogs**

**The same for both cats and  
dogs**

**Better for cats**

**Explain:**

## Day 2: Reflection

What is one thing you learned about AI today?



What are some things that are important to remember when designing your AI algorithm?



What is a question you have about AI?





### Day 3: Ethical Matrix

	_____	_____	_____	_____
_____				
_____				
_____				
_____				

### Day 3: Ethical Matrix

	_____	_____	_____	_____
_____				
_____				
_____				
_____				

### Day 3: Final Project Research

What category of AI examples did you choose?

Entertains

Goes Where Humans Can't

Helps People

Explores the World

Other: \_\_\_\_\_

Can you draw an example of this category of AI?

Circle all of the ethical concerns that are relevant to this AI:

- Unemployment
- Inequality
- Humanity
- Artificial UNintelligence
- Algorithmic Bias
- Security
- Unintended Consequences
- Other: \_\_\_\_\_

What are some ways this AI can be used?

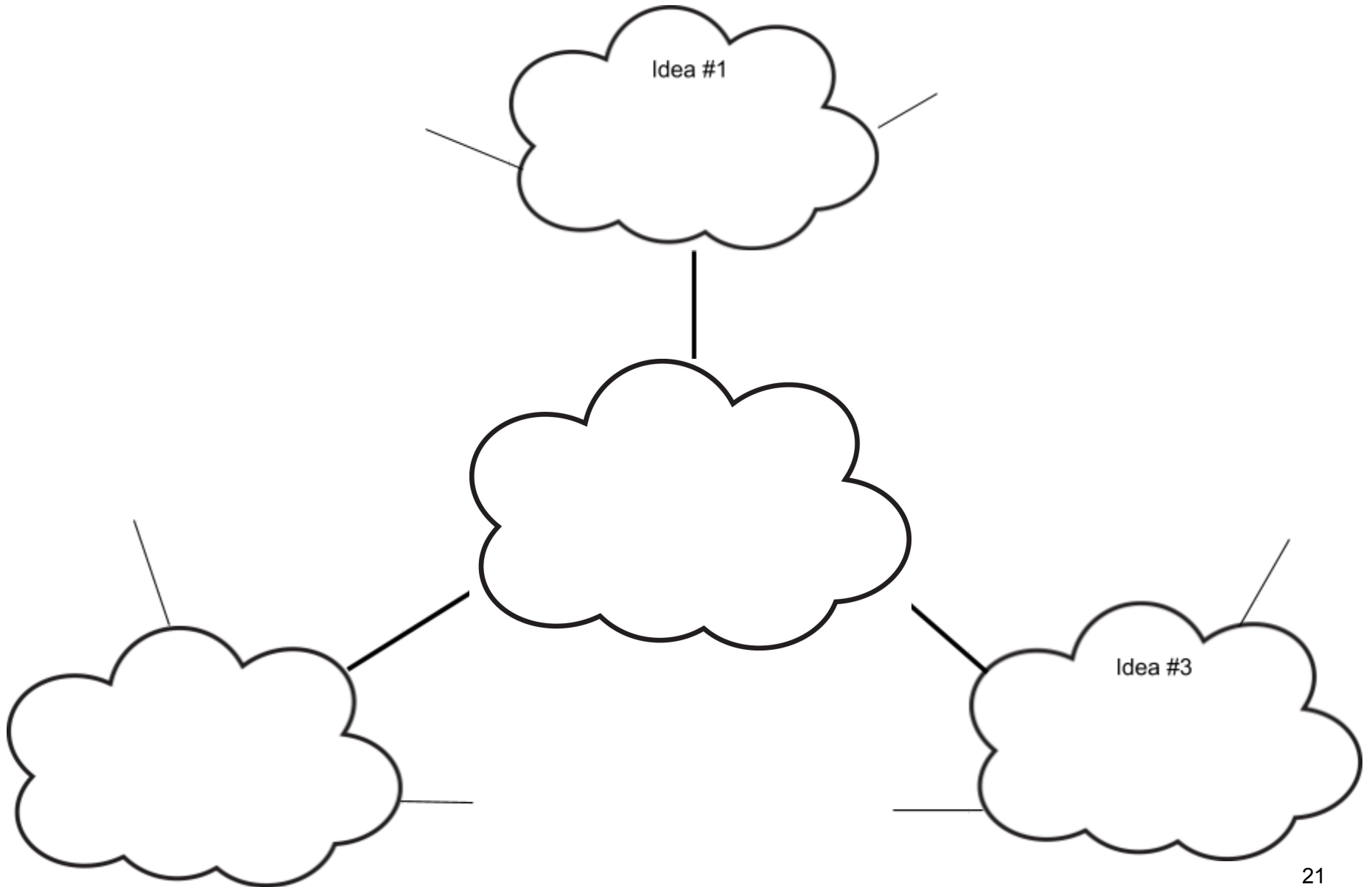
- 
- 
- 

What are some ways this AI can be *abused*?

- 
- 
-

### Day 3: Final Project Brainstorm

Use this worksheet to come up with as many ideas as possible for what you want to build for your final project.



## Day 3: Reflection

What is one thing you learned about AI today?

How much do you **agree** with the following statements?

a) Technology is a good thing for everyone.

0 . . . 5 . . . 10  
(not at all) (quite a lot)

b) AI is a technology that mostly benefits humanity.

0 . . . 5 . . . 10  
(not at all) (quite a lot)

c) AI designers always think about stakeholders.

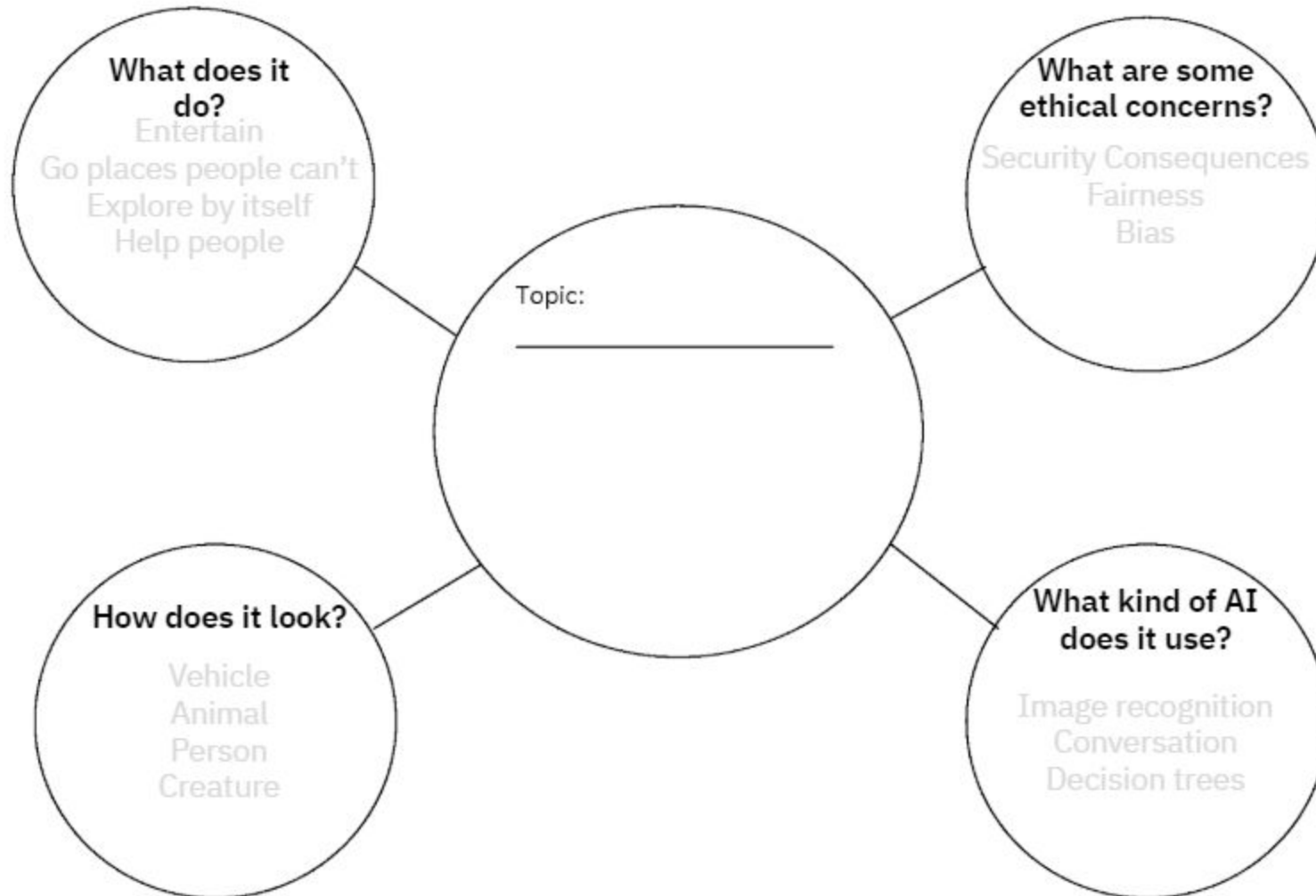
0 . . . 5 . . . 10  
(not at all) (quite a lot)

d) It is difficult to build AI that reduces harm.

0 . . . 5 . . . 10  
(not at all) (quite a lot)

What is a question you have about AI?

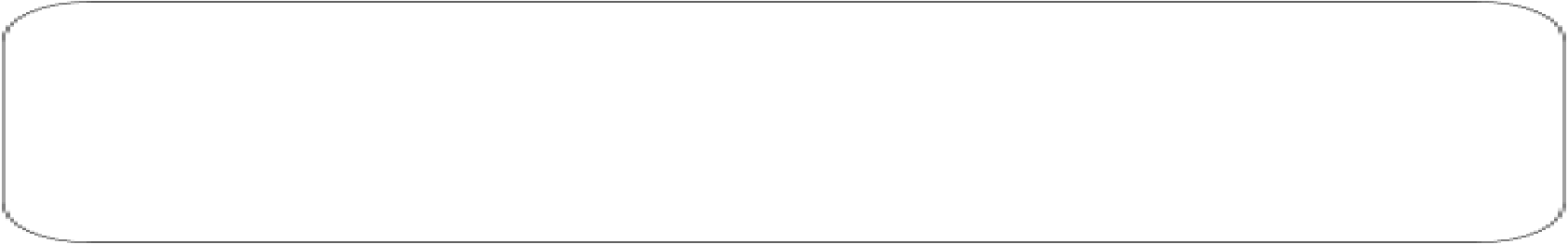
## Day 4: Final Project Planning



## Day 4: Final Project Peer Review

Review the project of another group and give them feedback using this form. Remember to be constructive!

Things I like about the project:

A large, empty rounded rectangular box with a thin black border, intended for writing feedback on things liked about the project.

Things I think could be exciting to add or change:

A large, empty rounded rectangular box with a thin black border, intended for writing feedback on things that could be exciting to add or change.

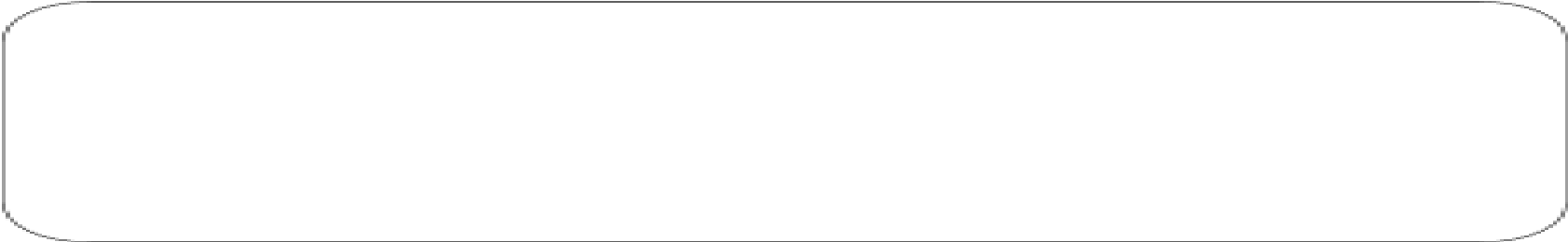
Things I am not sure about:

A large, empty rounded rectangular box with a thin black border, intended for writing feedback on things the reviewer is not sure about.



## Day 4: Reflection

What is something you learned about AI? What is something you have a question about?



What is your idea for your final project? Who are the stakeholders for your final project?



How did you decide which stakeholders to design for in your final project?



## Additional Activity: Build Your Own Decision Tree

Topic: \_\_\_\_\_

