

ML and Society

Feb 3, 2022

Please have a face mask on

Masking requirement



UR requires all students, employees and visitors – regardless of their vaccination status – to wear face coverings while inside campus buildings.

<https://www.buffalo.edu/coronavirus/health-and-safety/health-safety-guidelines.html>

Who does my machine
learning model serve?

How do I know?

**What can I do
about it?**

Read the syllabus carefully!

CSE 440/441/540

Syllabus

Piazza

Schedule

Autolab

Notebooks

Project+

Impossible Project

Bonus Points

Resources +

CSE 440/441/540 (Machine Learning and Society) Syllabus

Spring 2022

Tuesdays and Thursdays, 9:30-10:50am, Davis [☞](#) 101.

Under Construction

This page is still under construction. In particular, nothing here is final while this sign still remains here.

Please note

It is **your responsibility** to make sure you read and understand the contents of this syllabus. If you have any questions, please contact the instructor.

Academic Integrity

One (potential) project deadline TODAY 5pm!

Project Topics

Here are the four proposed projects (each link leads you to the page for the specific project, which has more details on what each project will entail):

1. Human acceptance of algorithmically controlled systems
2. Incorporating multiple notions of fairness
3. Algorithmic Auditing
4. Creating more teaching tools for ML and Society course

Highly recommended

We **strongly** encourage y'all to pick from the project topics listed above since we have put some thought into creating projects that are (1) fun! but (2) also feasible within the time frame of a semester.

However, see the point below.

If you want to propose your own project

While we hope that y'all will pick from one of the topics listed above, we do want to give y'all a chance to propose your own project *if you have a strong reason to do so* (e.g. such a project will be very closely related to your major and/or you took this course because you had a specific project in mind).

If you go down this path, you need to let Atri know by 5pm on THURSDAY February 3, 2022. *If you miss this deadline, then you will have to choose from one of the above topics.*

Make sure you are on piazza

The screenshot shows the Piazza LMS interface for a course. The top navigation bar includes the Piazza logo, course ID (CSE 440/441/540), and links for Q&A, Resources, Statistics, and Manage Class. A user profile for 'Amit Rabin' is visible in the top right. The main content area is titled 'Class at a Glance' and features several key metrics:

- Class Status:** Three green checkmarks indicate 'no unread posts', 'no unanswered questions', and 'no unresolved followups'.
- License Status:** Active instructor license.
- Activity Metrics:** 10 total posts, 13 total contributions, 2 instructors' responses, 0 students' responses, and an avg. response time of n/a.
- Student Enrollment:** A progress bar shows 22 enrolled out of 30 potential students.

Below these metrics, there are sections for 'Share Your Class' (with a demo link) and '2021 Product Updates'. The left sidebar contains a 'New Post' button and a search bar, followed by a list of recent posts such as 'Search for Teammate!', 'Project proposal due Friday...', and 'Welcome to the ML and Sool...'.

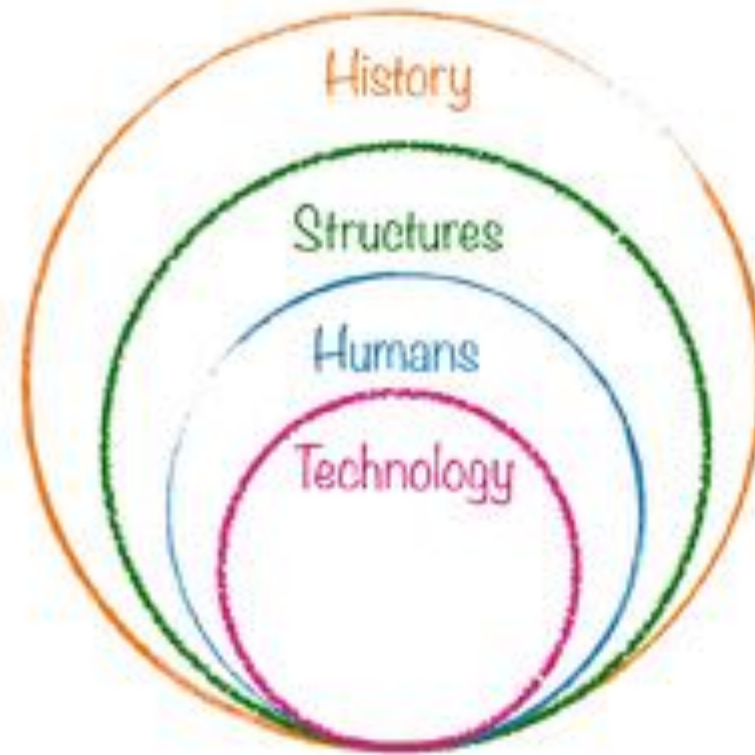
Impossible Project event

Join us for an evening of presentations and discussion regarding the:

Impossible Project

Making Computing Anti-Racist.

During the Fall semester of 2021, 600 first-year UB students in Computer Science and Engineering accepted the challenge to imagine what it would take to build a world in which computing could become anti-racist. Starting with the specific case of the use of predictive policing algorithms, they proposed computational and non-computational solutions to the problems exacerbated by technology in society.



Few things I forgot to mention

If something does not make sense, it's almost surely my fault!

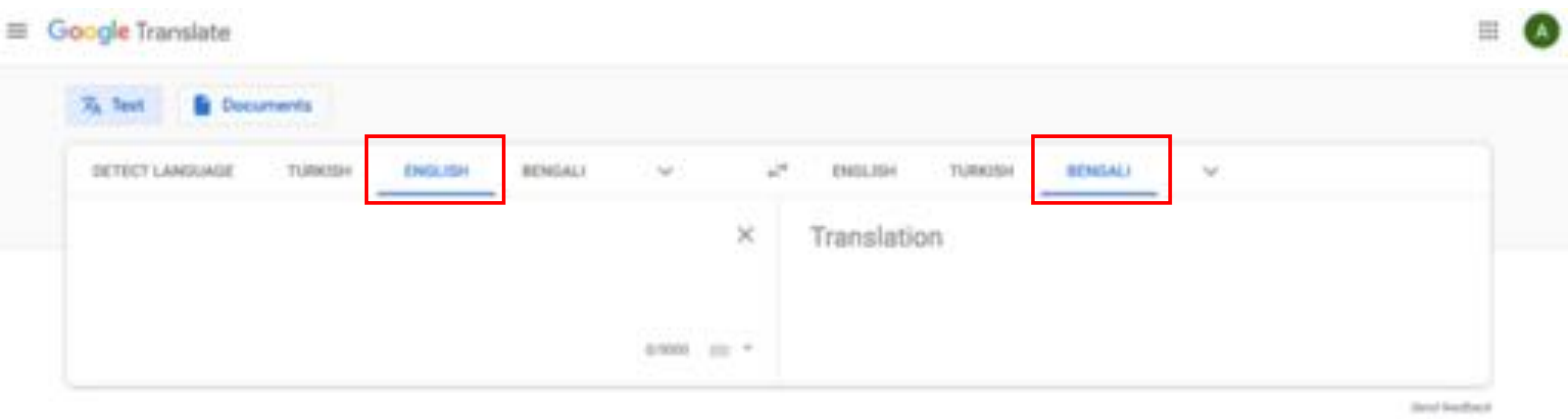


Feedback is greatly appreciated!

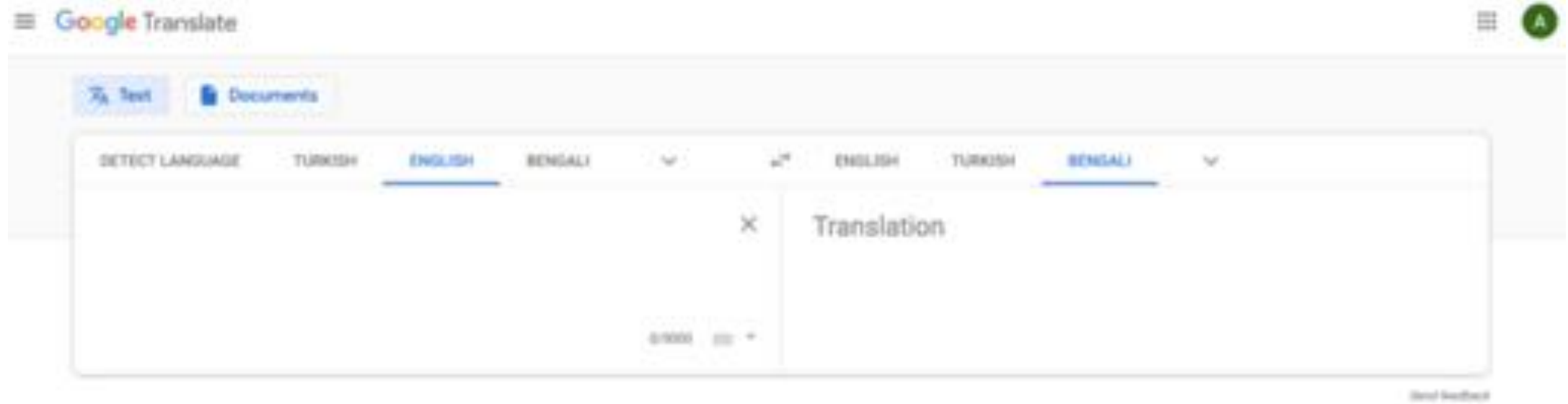
Questions/Comments?



Let's move to Google translate



Translation job# 1



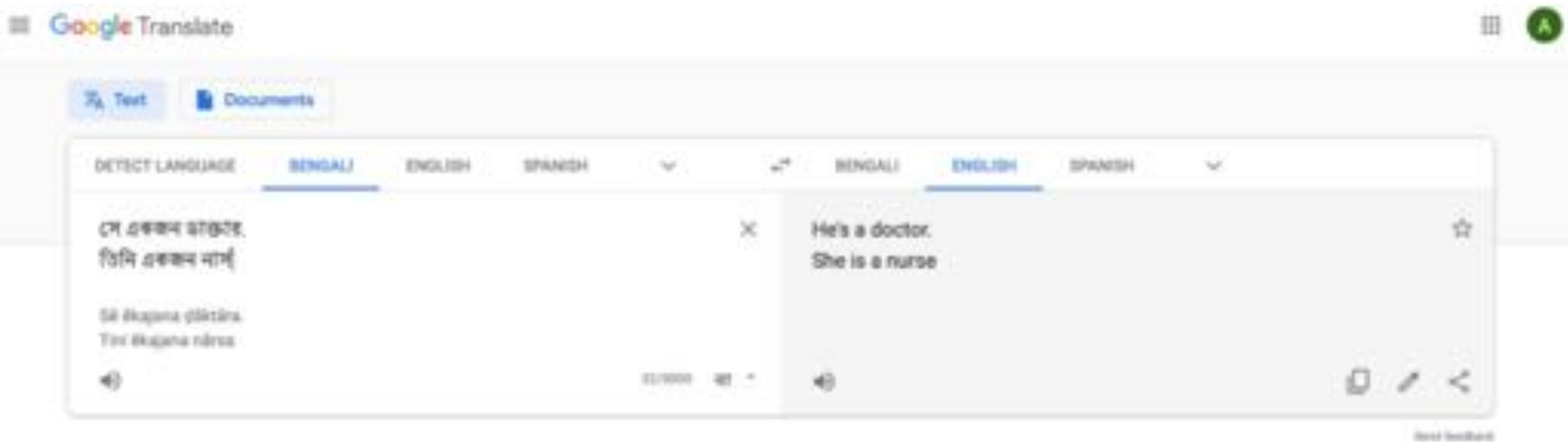
She is a doctor
He is a nurse

Hit translate once...

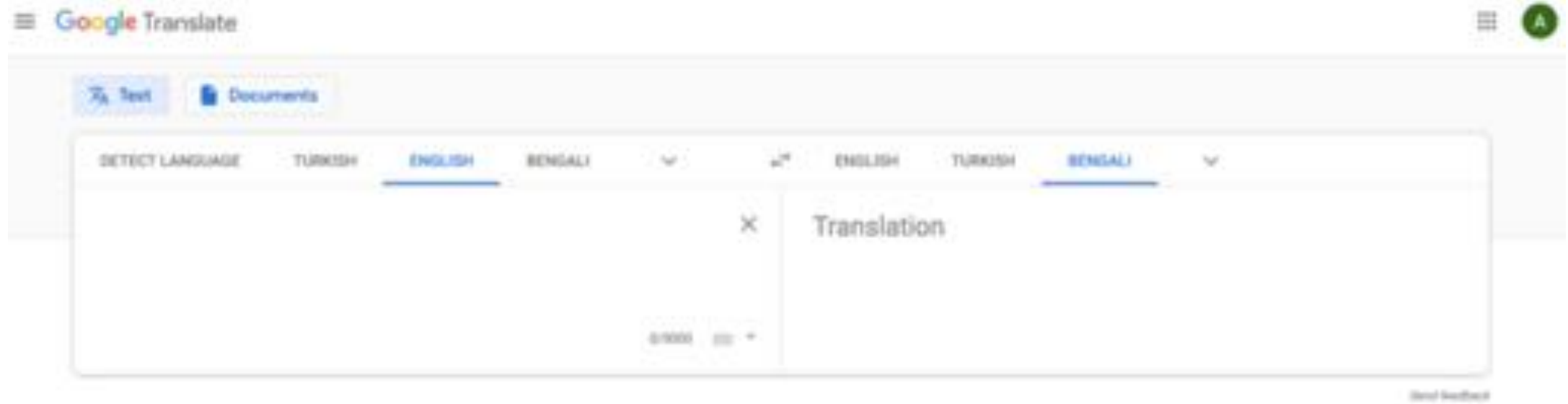
The screenshot shows the Google Translate web interface. At the top left is the Google Translate logo. Below it are two tabs: 'Text' (selected) and 'Documents'. The main interface is split into two panels. The left panel is for the source language, 'ENGLISH', and contains the text: 'She is a doctor.
He is a nurse'. The right panel is for the target language, 'BENGALI', and contains the Bengali translation: 'সে একজন ডাক্তার,
তিনি একজন নার্স'. Below the Bengali text is a small note: 'সে একজন ডাক্তার
তিনি একজন নার্স'. The interface also includes language selection dropdowns, a star icon for saving, and a 'Send feedback' link at the bottom right.

Hit translate one more time!

Notice anything?



Translation job# 2



She is a mathematician
He is a dancer

Hit translate once...

The screenshot shows the Google Translate web interface. At the top left is the Google Translate logo. Below it are two tabs: 'Text' (selected) and 'Documents'. The main interface is split into two panels. The left panel is for the source language, set to 'ENGLISH'. It contains the text: 'She is a mathematician' and 'He is a dancer'. The right panel is for the target language, set to 'BENGLI'. It shows the Bengali translation: 'তিনি একজন গণিতবিদ' and 'তিনি একজন নৃত্যশিল্পী'. Below the Bengali text is a phonetic transcription: 'Tini ekajona ganitabida' and 'tini ekajona nryashilpi'. At the bottom right of the interface, there is a small text label: 'Send feedback'.

Hit translate one more time!

Notice anything?

The screenshot shows the Google Translate web interface. At the top left is the Google Translate logo. Below it are 'Text' and 'Documents' tabs. The main interface is split into two panels. The left panel is set to 'BENGALI' and contains the text: 'তিনি একজন গণিতবিদ' and 'তিনি একজন নৃত্যশিল্পী'. Below this is a smaller line of text: 'Tini ekajana ganitabida tini ekajana nrtysilpi'. The right panel is set to 'ENGLISH' and contains the translated text: 'He is a mathematician' and 'She is a dancer'. A star icon is visible in the top right corner of the English panel. At the bottom of the interface, there are icons for voice input, a character count '39 / 1,000', and a 'BT' button.

Questions to ponder

Questions to ponder

Do you think the above result are biased?

If not, why not?

If so,

- What do you think could be the reason for this bias?
- Do you think Google Translate is responsible?
- Should Google Translate do something to fix the bias?

Questions/Comments?



Why does this matter?



Questions/Comments?



So who is right?



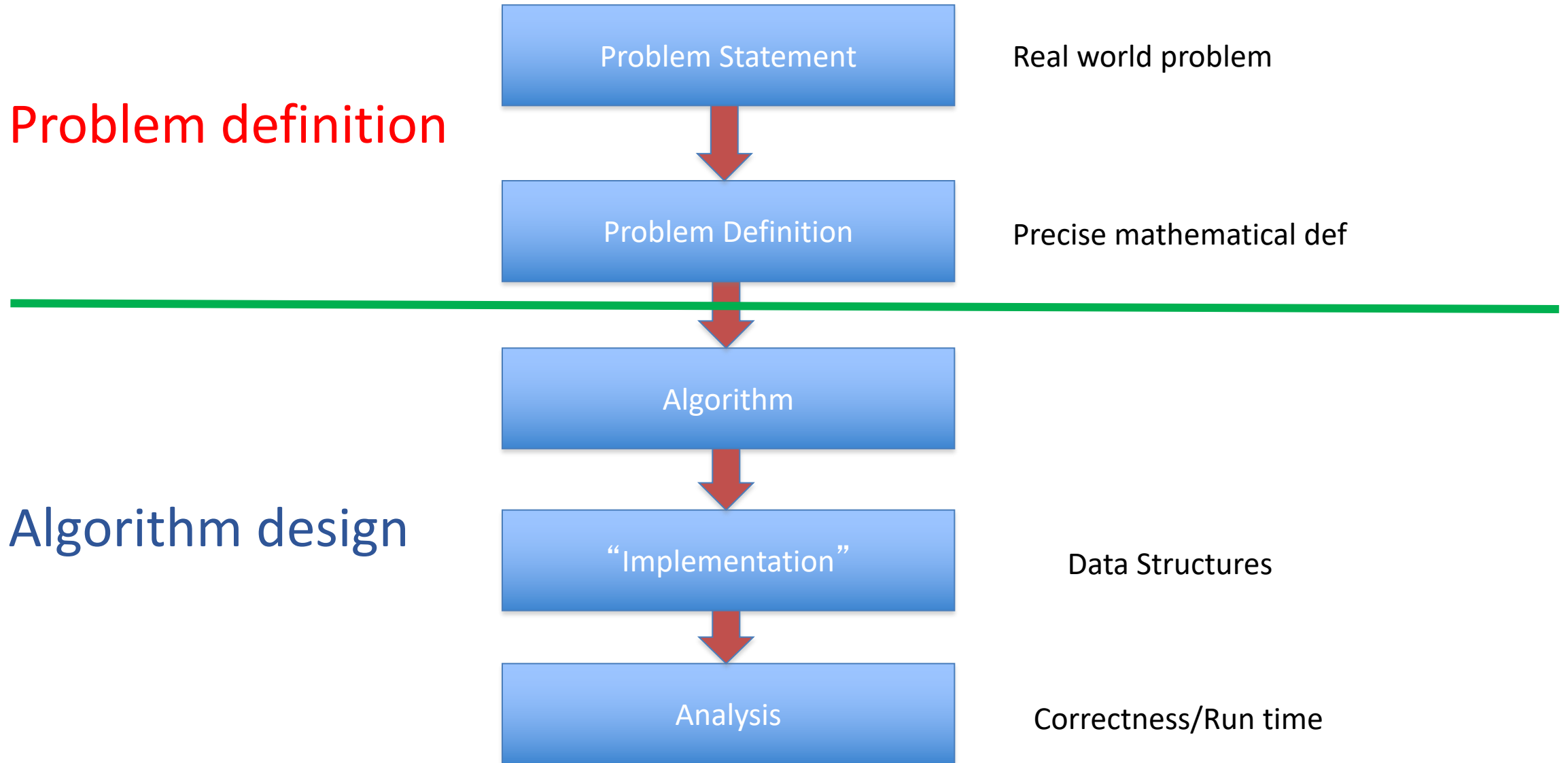
“Algorithms can be biased”



“Algorithms are based on math and hence cannot be biased”

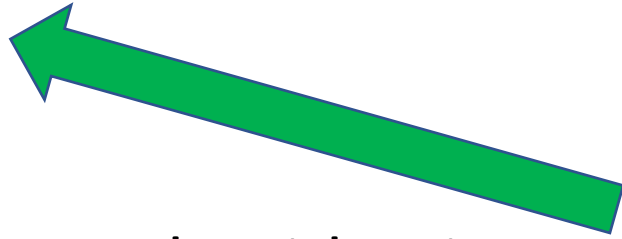
Depends on what
you mean by
“algorithm”

Main Steps in Traditional Algorithm Design

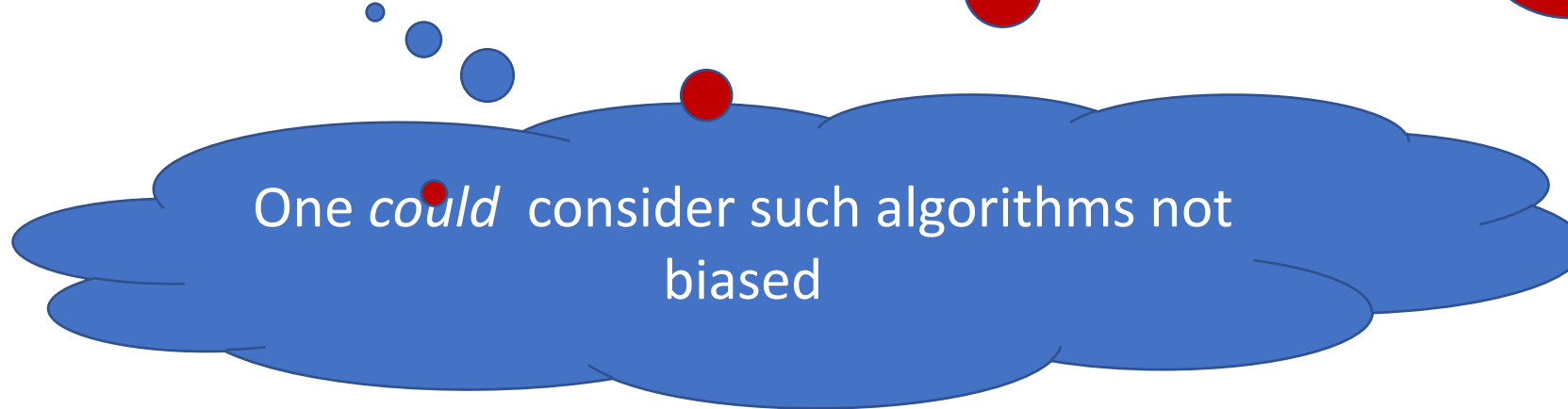
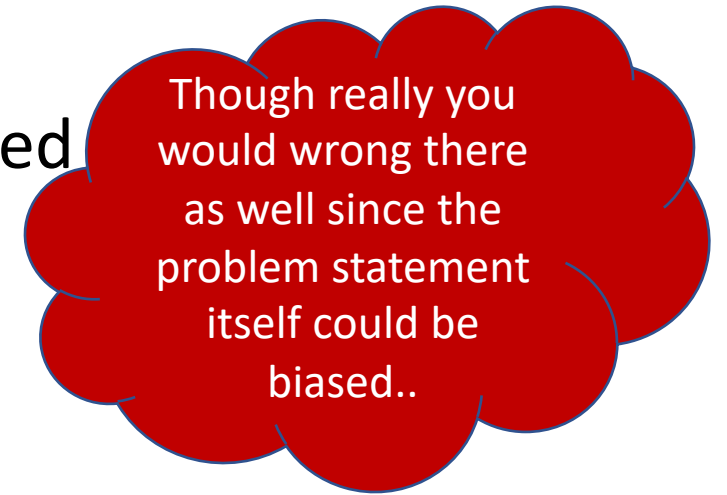


Two main points about traditional algorithms

Problem is defined BEFORE algorithm is designed



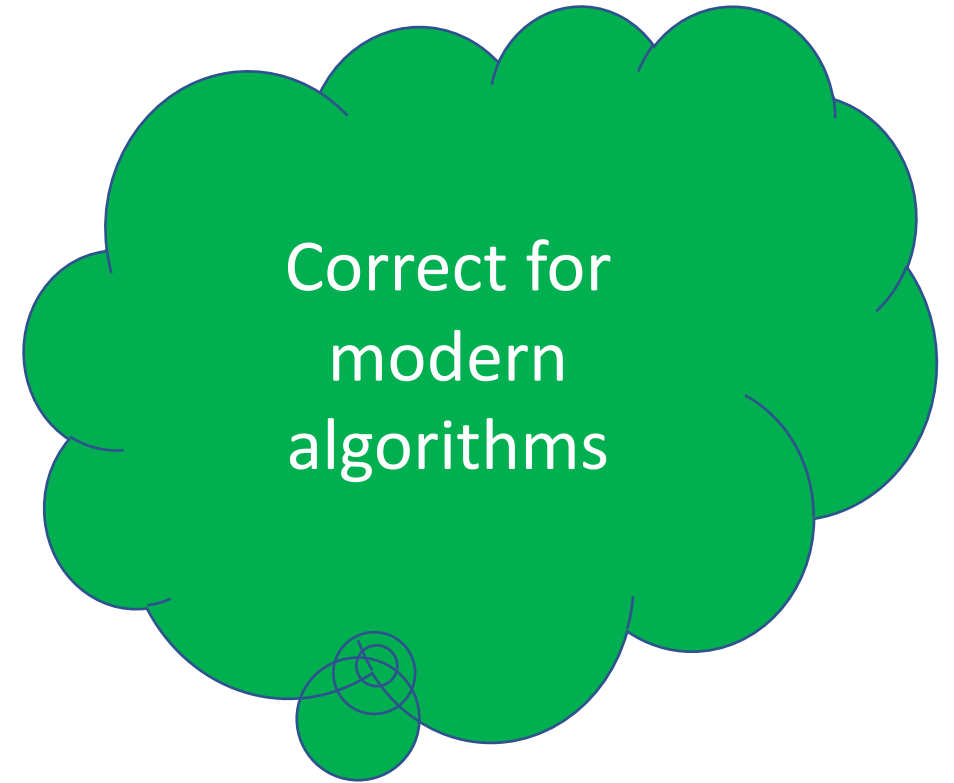
Can prove algorithm is correct for ALL inputs



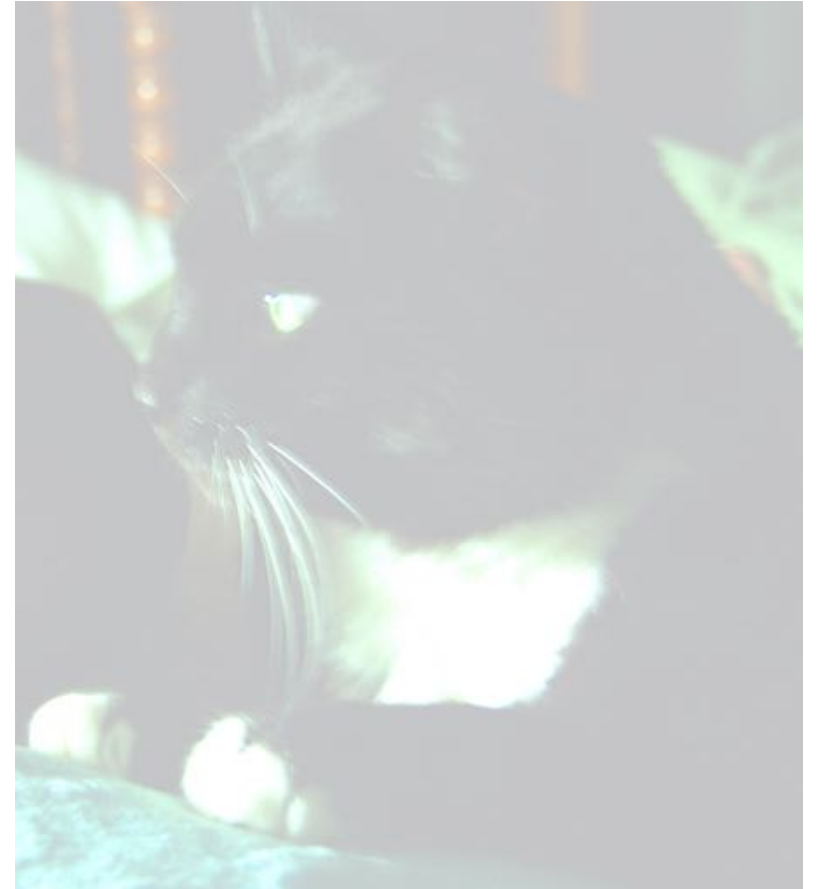
Today



“Algorithms can be biased”



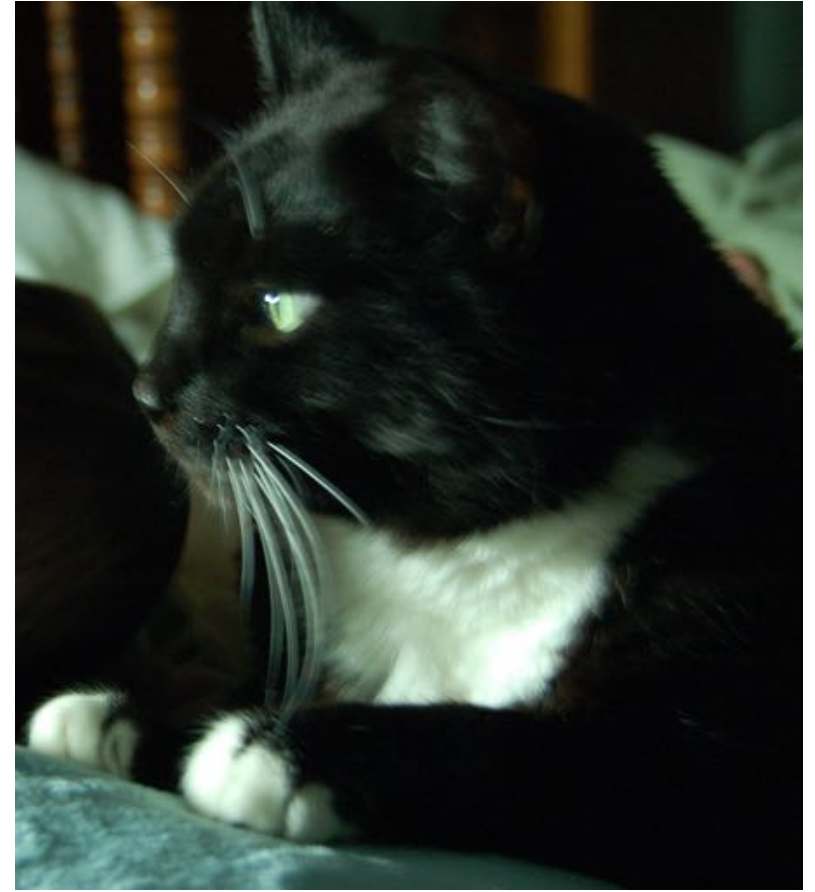
Cat vs. Dogs



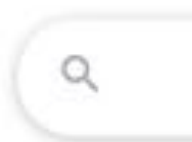
Warren and Billy



How do you “define” a dog vs cat image?



Google Images has “solved” this problem



Search by image ✕

Search Google with an image instead of text. Try dragging an image here.

How do you “define” a dog vs cat image?



<http://www-student.cse.buffalo.edu/~atri/algo-and-society/support/notes/intro/images/warren.JPG>

<http://www-student.cse.buffalo.edu/~atri/algo-and-society/support/notes/intro/images/billy.JPG>

Better way to get to the URL


CSE 440/441/540 Spring 2022

Schedule

The cats vs. dog is a "solved" problem



While you spend the rest of the semester trying to come up with a mathematically precise definition of when an image has a **cat** vs. when an image has a **dog**, let us see how existing platform already solves this problem. In fact, we will use the "reverse image search" capability of [Google Images](#) to try and identify the object in **Billy** and **Warren**'s images.

Reverse Image search for **Billy** and **Warren**

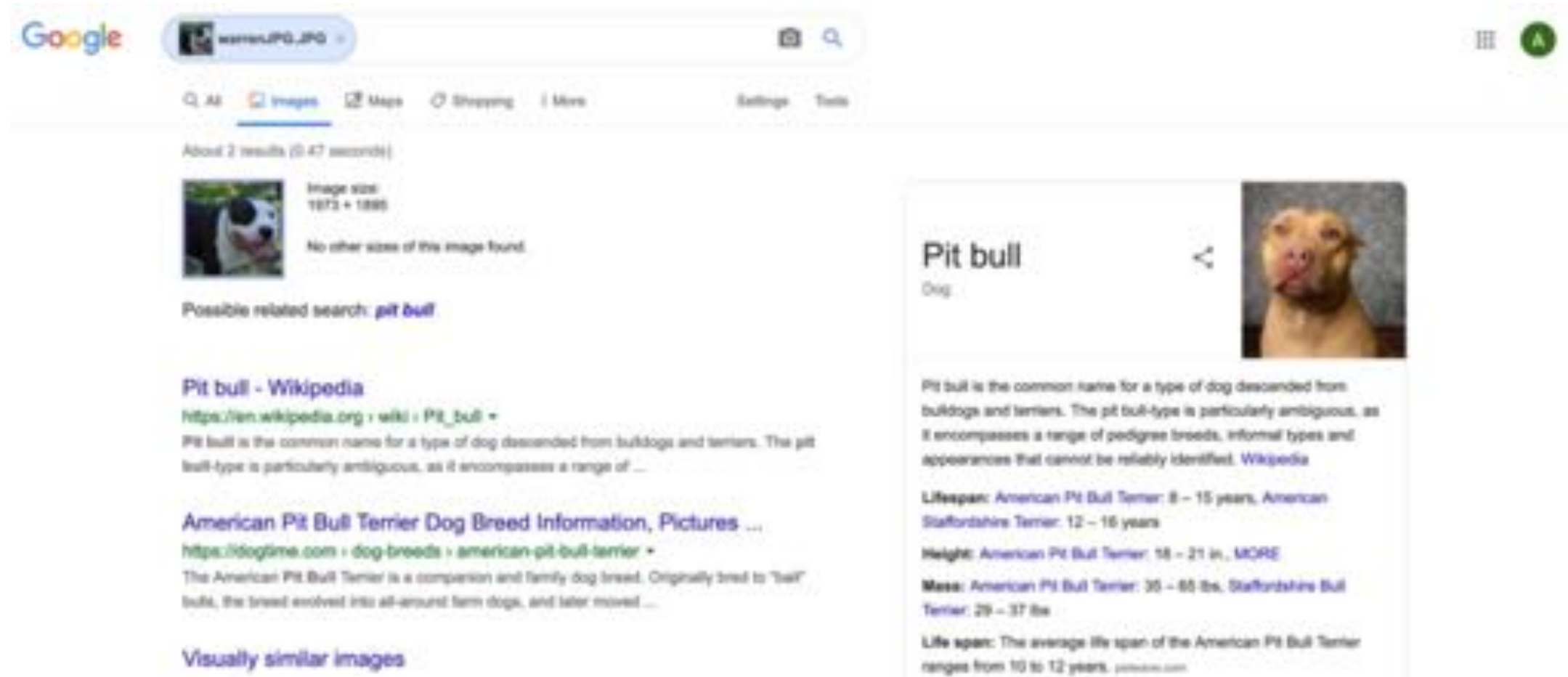
Go to [Google Images](#) and then perform a reverse image search for **Billy** and **Warren**. In particular, click on the "camera" icon (). Choose the **Paste Image URL** option using [this link for Billy](#) and [this link for Warren](#)

Future Listening/Reading/Watching Assignments

All listening/reading/watching assignments for future lectures are tentative till the **week before** the lecture. You can definitely listen/read/watch up on the future assignments but your discussion summaries will have to be based on the final reading assignments.

Date	Topic	Notes
Tue, Feb 1	Introduction  	

My result for Warren (Spring 20)



The screenshot shows a Google search interface. The search bar contains the text 'warren.JPG'. Below the search bar, there are navigation options: 'All', 'Images', 'Maps', 'Shopping', and 'More'. The search results are displayed below, starting with a small image of a dog's face. To the right of this image, it says 'Image size: 1072 x 1000' and 'No other sizes of this image found.' Below this, there is a link for 'Possible related search: pit bull'. The main search results are listed below, starting with 'Pit bull - Wikipedia' and 'American Pit Bull Terrier Dog Breed Information, Pictures ...'. On the right side of the search results, there is a large card for 'Pit bull' with a sub-label 'Dog' and a large image of a pit bull's face. The card contains detailed information about the breed, including its origin, lifespan, height, and mass.


Google

warren.JPG

All Images Maps Shopping More

Settings Tools

About 2 results (0.47 seconds)

 Image size: 1072 x 1000
No other sizes of this image found.


Possible related search: [pit bull](#)

[Pit bull - Wikipedia](#)
https://en.wikipedia.org/wiki/Pit_bull
Pit bull is the common name for a type of dog descended from bulldogs and terriers. The pit bull-type is particularly ambiguous, as it encompasses a range of ...

[American Pit Bull Terrier Dog Breed Information, Pictures ...](#)
<https://dogtime.com/dog-breeds/american-pit-bull-terrier>
The American Pit Bull Terrier is a companion and family dog breed. Originally bred to "bull" fight, the breed evolved into all-around farm dogs, and later moved ...

[Visually similar images](#)

Pit bull
Dog



Pit bull is the common name for a type of dog descended from bulldogs and terriers. The pit bull-type is particularly ambiguous, as it encompasses a range of pedigree breeds, informal types and appearances that cannot be reliably identified. [Wikipedia](#)

Lifespan: American Pit Bull Terrier: 8 – 15 years, American Staffordshire Terrier: 12 – 16 years

Height: American Pit Bull Terrier: 18 – 21 in., [MORE](#)

Mass: American Pit Bull Terrier: 35 – 60 lbs., Staffordshire Bull Terrier: 29 – 37 lbs.


Life span: The average life span of the American Pit Bull Terrier ranges from 10 to 12 years. [peterson.com](#)

My result for Warren (Spring 22)

JPG - martingale

Q, All Images Maps Shopping More Tools


About 3 results (0.18 seconds)

 Image size: 1973 x 1895
No other sizes of this image found.

Possible related search: [martingale](#)


[https://en.wikipedia.org/wiki/Martingale_\(probability_theory\)](https://en.wikipedia.org/wiki/Martingale_(probability_theory)) -
Martingale (probability theory) - Wikipedia
In probability theory, a martingale is a sequence of random variables (i.e., a stochastic process) for which, at a particular time, the conditional ...


[https://en.wikipedia.org/wiki/Martingale_\(betting_system\)](https://en.wikipedia.org/wiki/Martingale_(betting_system)) -
Martingale (betting system) - Wikipedia
A martingale is a class of betting strategies that originated from and were popular in 18th-century France. The simplest of these strategies was designed ...

Martingale Collar 

A martingale is a type of dog collar that provides more control over the animal without the choking effect of a slip collar. Martingale dog collars are also known as greyhound, whippet or humane choke collars.
[Wikipedia](#)

Feedback

 Visually similar images




My result for Billy

JPG domestic short-haired cat

Images Maps Shopping More Tools


About 3 results (0.54 seconds)


 Image size: 1763 x 1091
No other sizes of this image found.


Possible related search: [domestic short-haired cat](#)

[https://en.wikipedia.org/wiki/Domestic_short-haired...](https://en.wikipedia.org/wiki/Domestic_short-haired_cat)
Domestic short-haired cat - Wikipedia
Domestic short-haireds are the most common cat in the United States, accounting for around 90–95% of their number. ... Other generic terms include house cat and ...

[https://www.hillspet.com/Cat-Care/What's New?](https://www.hillspet.com/Cat-Care/What's-New?)
Domestic Shorthair Cat Breed: Personality & Info | Hill's Pet
Animal Planet affectionately refers to Domestic shorthair cats as the mutts of the cat world because they're a mix of various breeds, resulting in a vast range ...





 **Visually similar images**



Domestic short-haired cat 

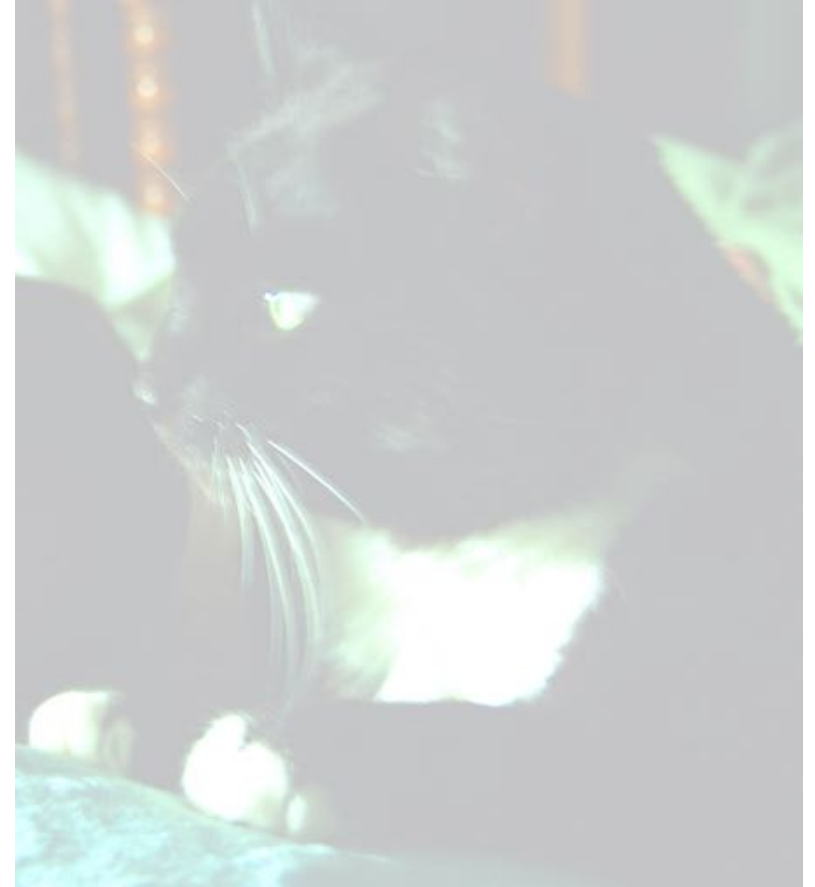
A domestic short-haired cat is a cat of mixed ancestry—thus not belonging to any particular recognised cat breed—possessing a coat of short fur. In Britain they are sometimes colloquially called moggies. [Wikipedia](#)


Shorthair cat breeds [View 45+ more](#)

 **British Shorthair**  **American Shorthair**  **Persian cat**  **Maine Coon**

[Feedback](#)

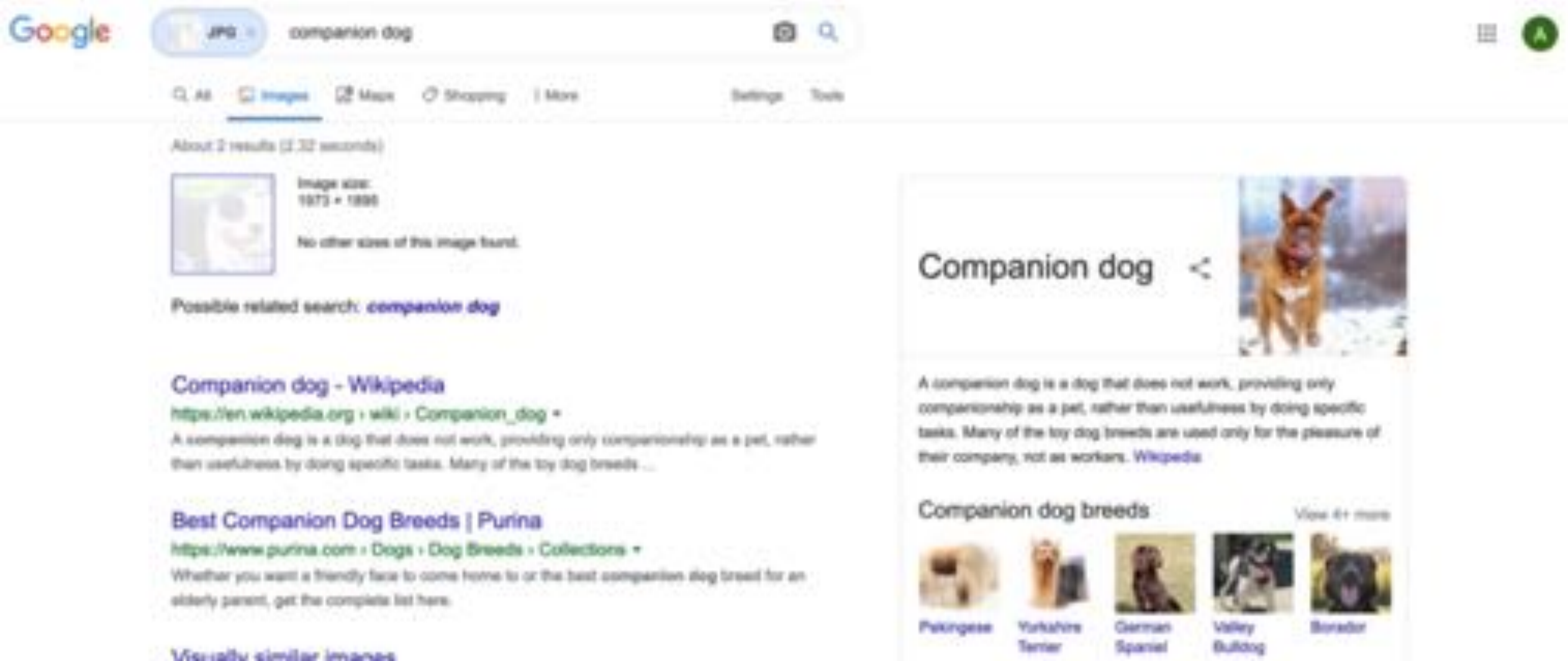
So cats vs dogs problem solved?





Here are the detailed instructions. Go to [Google Images](#) and then perform a reverse image search for **Billy** and **Warren**. In particular, click on the "camera" icon ().

Choose the **Paste Image URL** option using [this link for modified picture of Billy](#) and [this link for modified picture of Warren](#)


My result for modified Warren (Spring 20)




Google  


[All](#) [Images](#) [Maps](#) [Shopping](#) [More](#) [Settings](#) [Tools](#)

About 2 results (2.32 seconds)



 Image size: 1073 x 1000
No other sizes of this image found.

Possible related search: [companion dog](#)

Companion dog - Wikipedia
https://en.wikipedia.org/wiki/Companion_dog 
A companion dog is a dog that does not work, providing only companionship as a pet, rather than usefulness by doing specific tasks. Many of the toy dog breeds ...






Best Companion Dog Breeds | Purina
<https://www.purina.com/Dogs/DogBreeds/Collections> 
Whether you want a friendly face to come home to or the best companion dog breed for an elderly parent, get the complete list here.

[Visually similar images](#)





Companion dog  

A companion dog is a dog that does not work, providing only companionship as a pet, rather than usefulness by doing specific tasks. Many of the toy dog breeds are used only for the pleasure of their company, not as workers. [Wikipedia](#)

Companion dog breeds [View 4+ more](#)


 Pekingese	 Yorkshire Terrier	 German Spaniel	 Valley Bulldog	 Border
---	---	--	--	--

My result for modified Warren (Spring 22)

[All](#) [Images](#) [Maps](#) [Shopping](#) [More](#) [Tools](#)


About 2 results (0.36 seconds)

 Image size: 1973 x 1896
No other sizes of this image found.

Possible related search: [martingale](#)


[https://en.wikipedia.org/wiki/Martingale_\(probability_theory\)](https://en.wikipedia.org/wiki/Martingale_(probability_theory)) - [Wikipedia](#)
In probability theory, a martingale is a sequence of random variables (i.e., a stochastic process) for which, at a particular time, the conditional ...

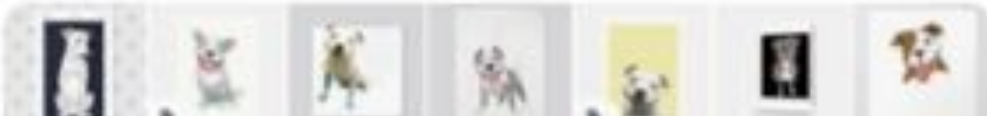
[https://en.wikipedia.org/wiki/Martingale_\(betting_system\)](https://en.wikipedia.org/wiki/Martingale_(betting_system)) - [Wikipedia](#)
A martingale is a class of betting strategies that originated from and were popular in 18th-century France. The simplest of these strategies was designed ...

 **Martingale**
Collar

A martingale is a type of dog collar that provides more control over the animal without the choking effect of a slip collar. Martingale dog collars are also known as greyhound, whippet or humane choke collars.
[Wikipedia](#)

[Feedback](#)

 **Visually similar images**

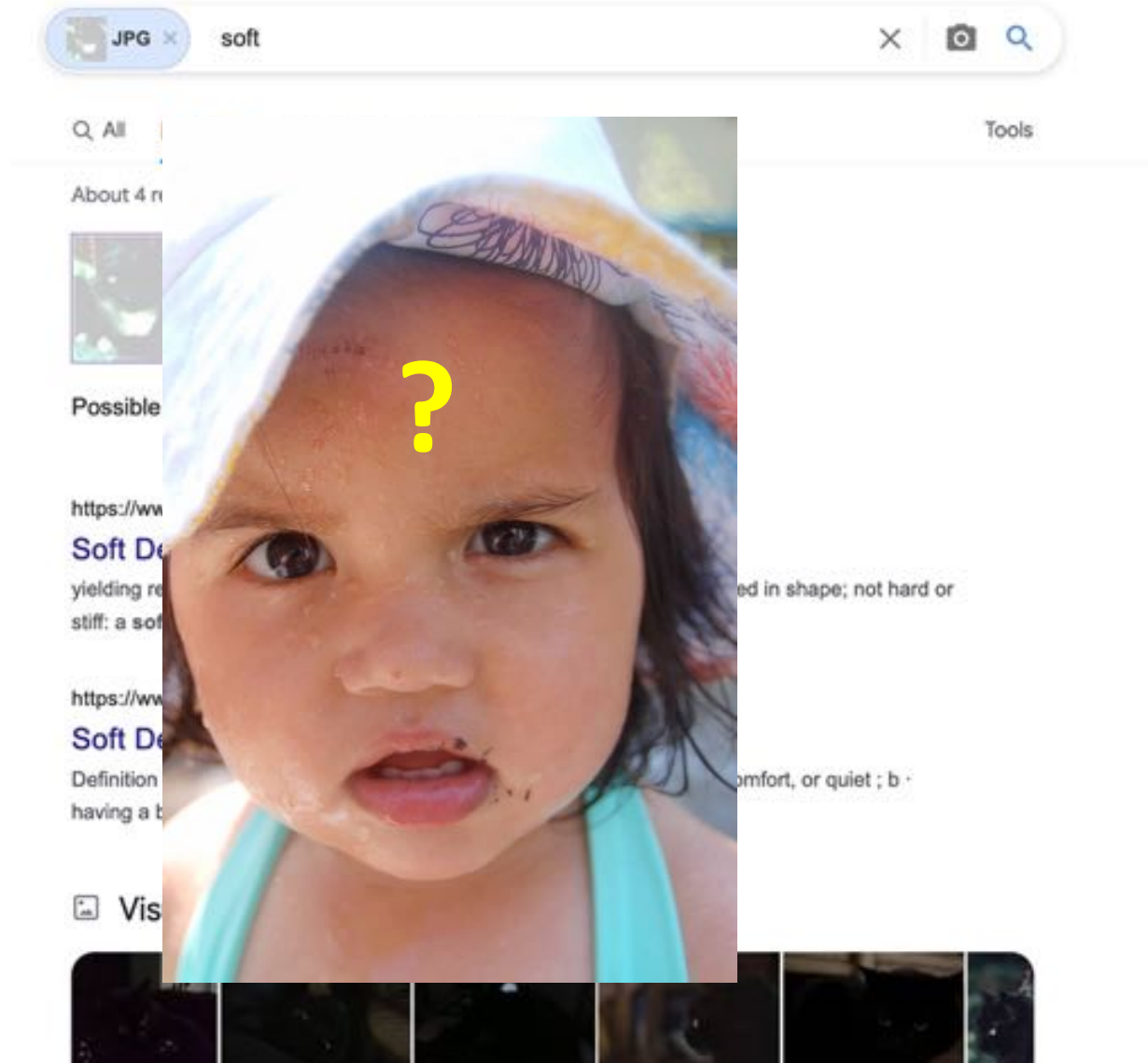


My result for modified Billy (Spring 20)

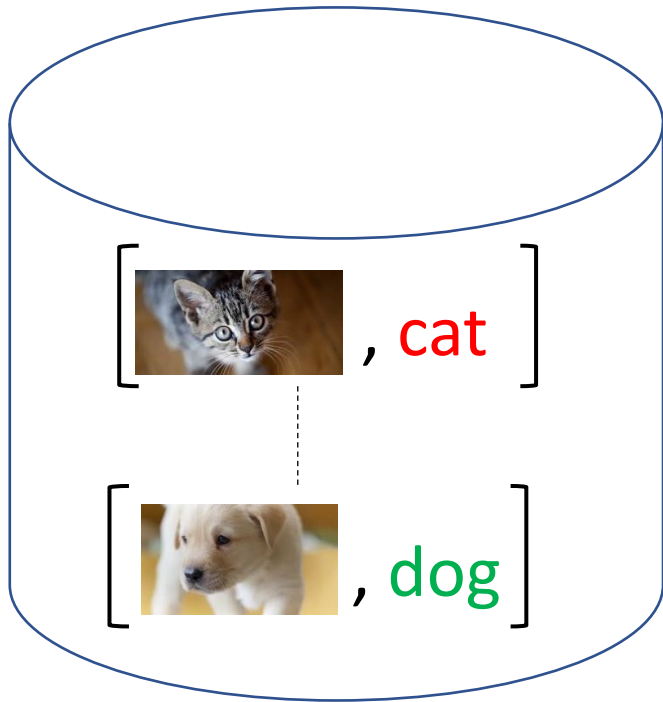
The image shows a Google search interface. The search bar contains the text 'fish'. Below the search bar, there are navigation options: 'All', 'Images', 'Maps', 'Shopping', and 'More'. The search results show 'About 2 results (1.40 seconds)'. A small thumbnail image is visible with the text 'Image size: 1763 x 1081' and 'No other sizes of this image found.' Below this, there is a section for 'Possible related search: fish'. The main search results list 'Fish - Wikipedia' and 'Pet Fish for Sale: Tropical and Freshwater Fish | PetSmart'. On the right side, there is a knowledge panel for 'Fish' with a small image of a fish. The knowledge panel includes the following information:

- Fish**
Animal
- Fish are gill-bearing aquatic craniate animals that lack limbs with digits. They form a sister group to the tunicates, together forming the outgroup. Included in this definition are the living hagfish, lampreys, and cartilaginous and bony fish as well as various extinct related groups. [Wikipedia](#)
- Lifespan:** Common carp: 20 years, [MORE](#)
- Phylum:** [Chordata](#)
- Mass:** Common carp: 4.4 – 31 lbs, Northern pike: 34 lbs, [MORE](#)
- Length:** Common carp: 16 – 31 in., Siamese fighting fish: 2.8 in., [MORE](#)
- Speed:** Ocean sunfish: 2 mph, Great white shark: 35 mph
- Clutch size:** Common carp: 300,000, Siamese fighting fish: 10 – 40

My result for modified Billy



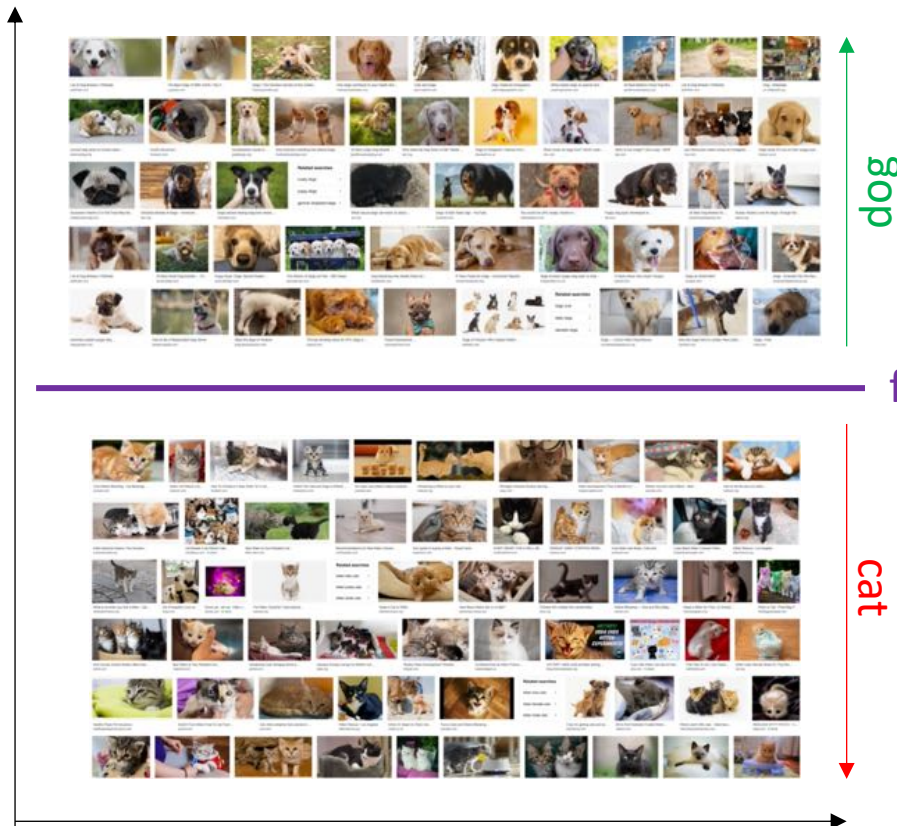
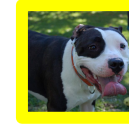
How does Google Images work?



Training



When a new image comes in



When an algorithm isn't...

Cc



Suresh Venkat [Follow](#)

Oct 2, 2015 · 5 min read



Go

The popular press is full of articles about “algorithms” and “algorithmic fairness” and “algorithms that discriminate, (or don’t)”. As a computer scientist (and one who studies algorithms to boot), I find all this attention to my field rather gratifying, and not a bit terrifying.

igs

What’s even more pleasing is that the popular explanation of an algorithm follows along the lines of the definition we’ve been using since, well, forever

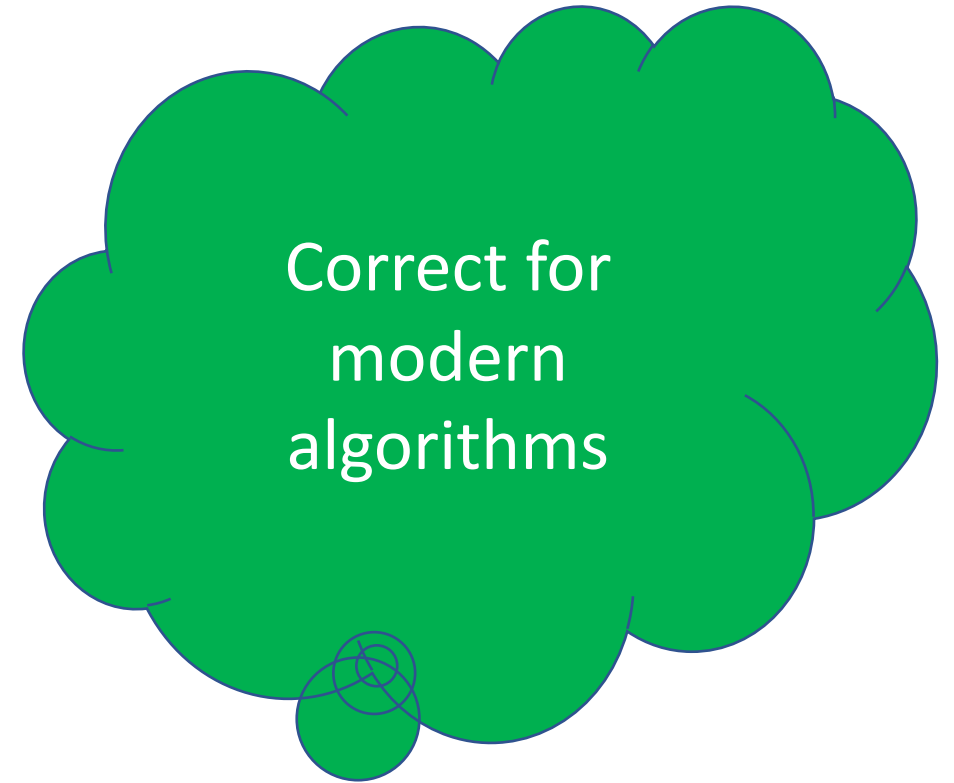
An algorithm is a set of steps (the instructions) each of which is simple and well defined, and that stops after a finite number of these steps.

If we wanted a less intimidating definition of an algorithm, we turn to the kitchen:

AOC is right!



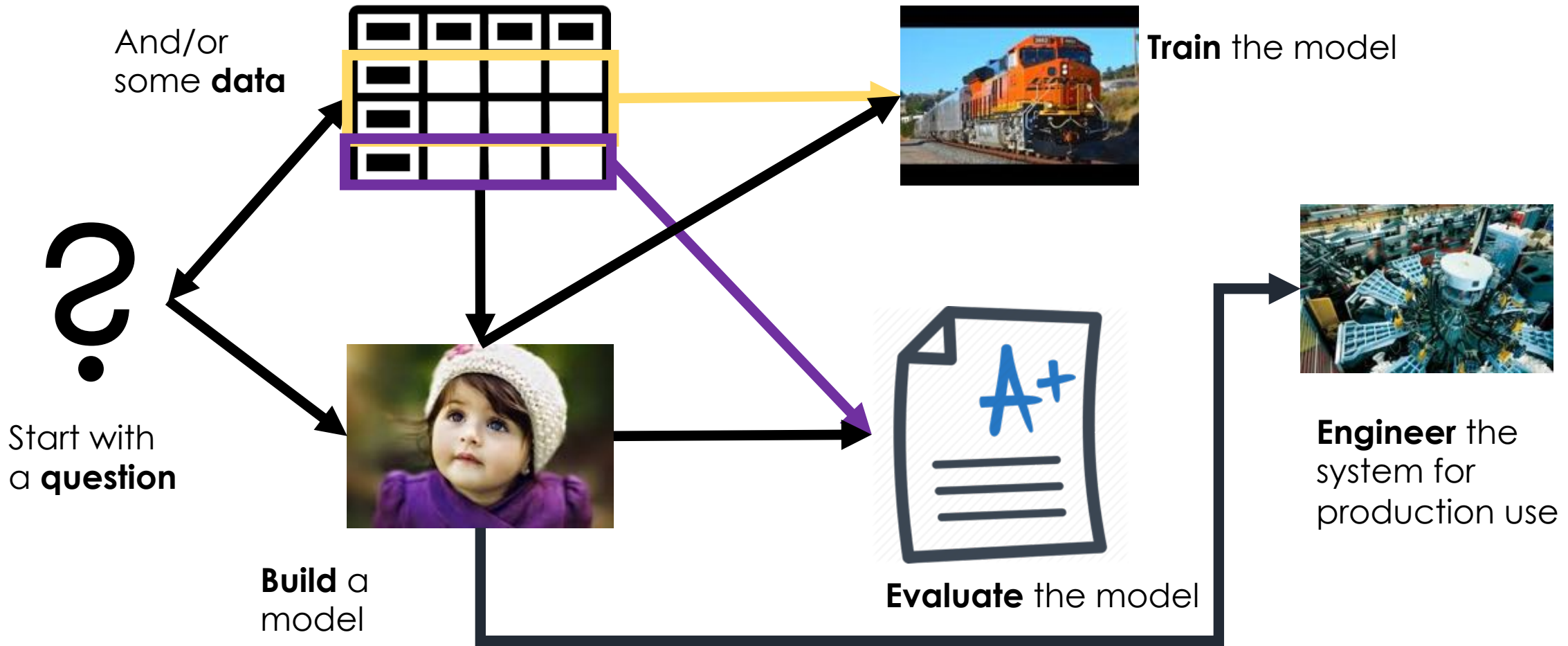
“Algorithms can be biased”



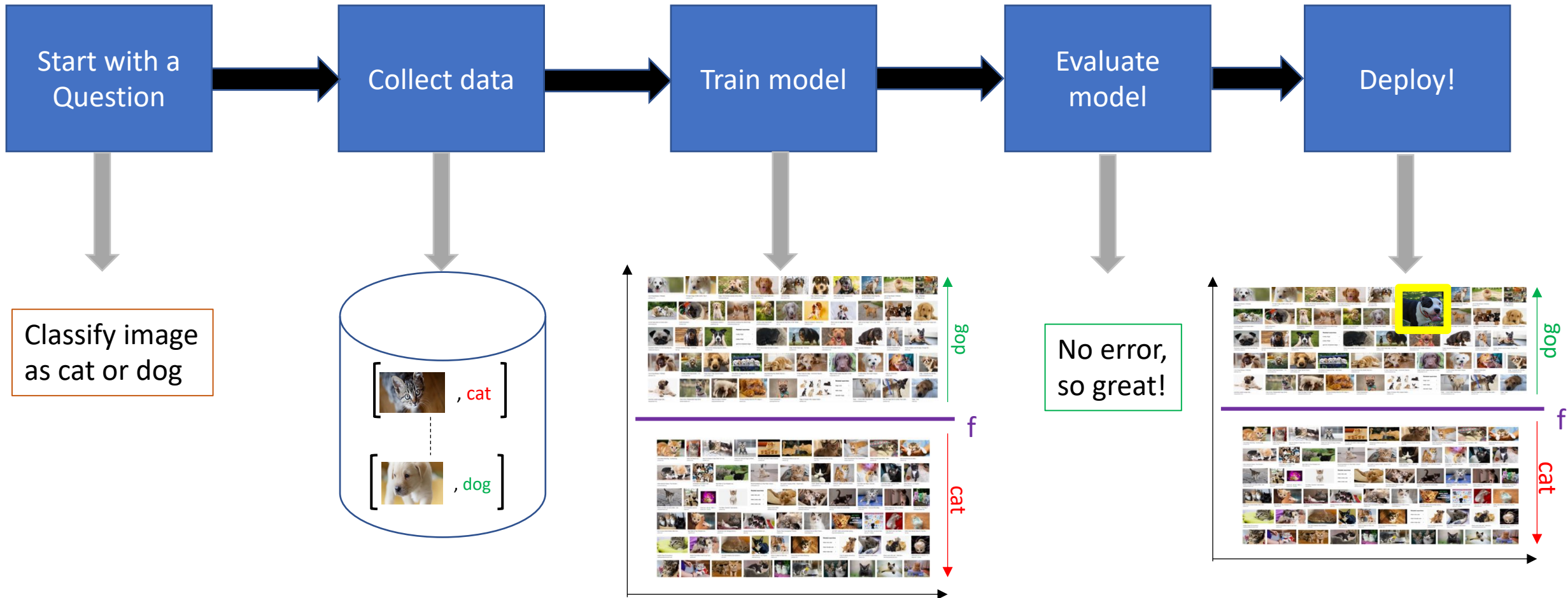
Modern Algorithm = Machine Learning (ML)



The Machine Learning Pipeline

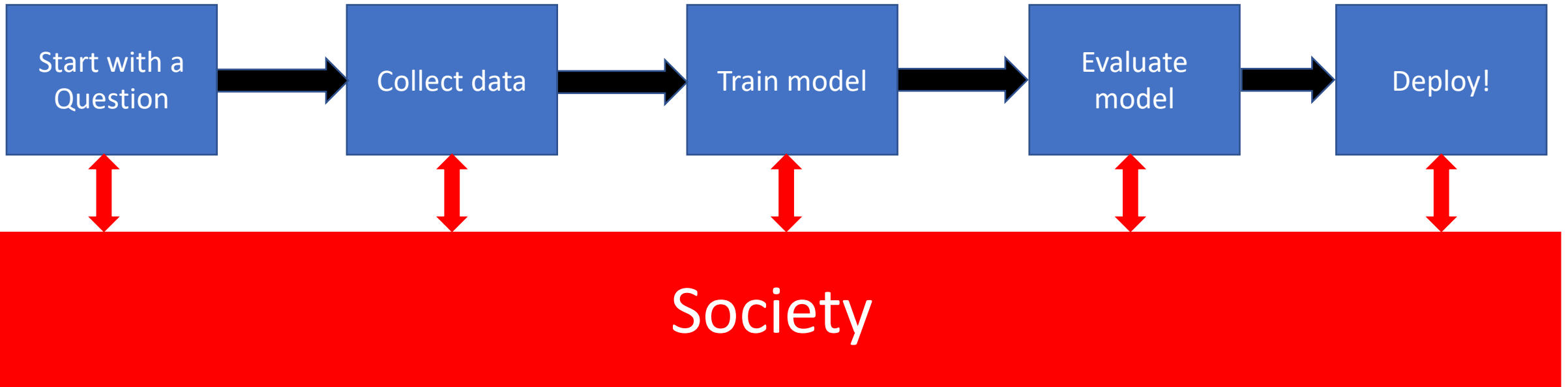


Back to cats vs. dogs

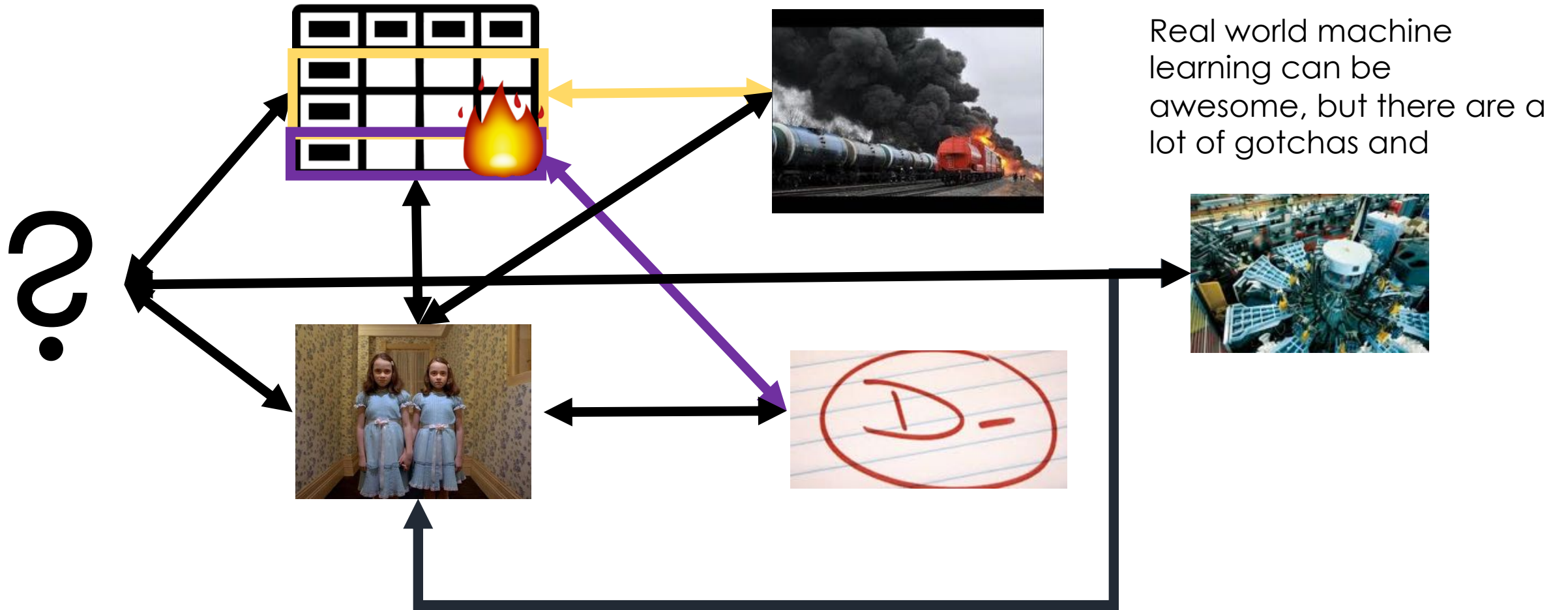




What is missing from this picture?



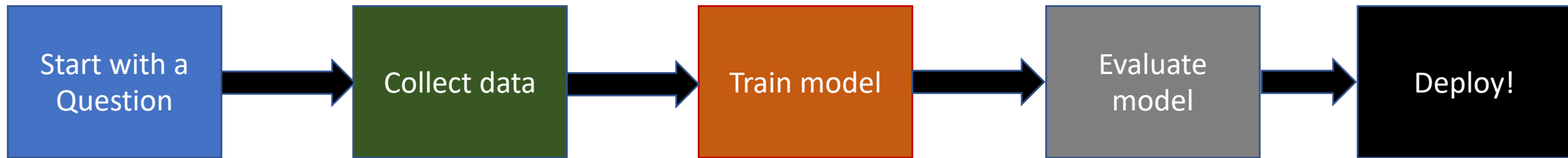
A real view of the ML Pipeline



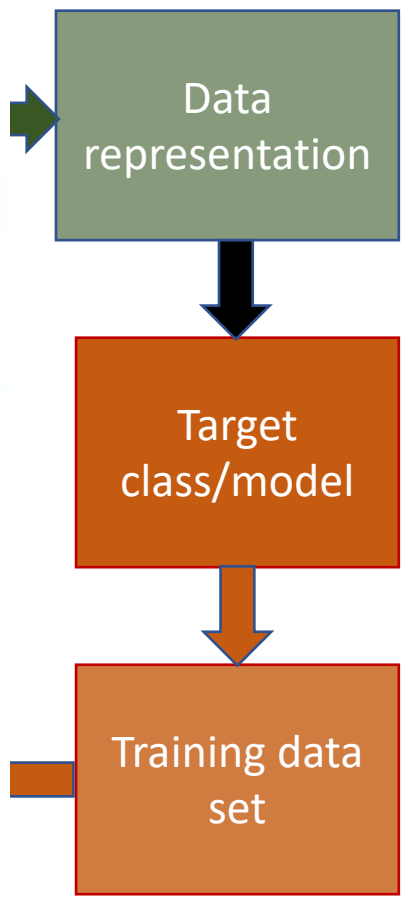
Real world machine learning can be awesome, but there are a lot of gotchas and



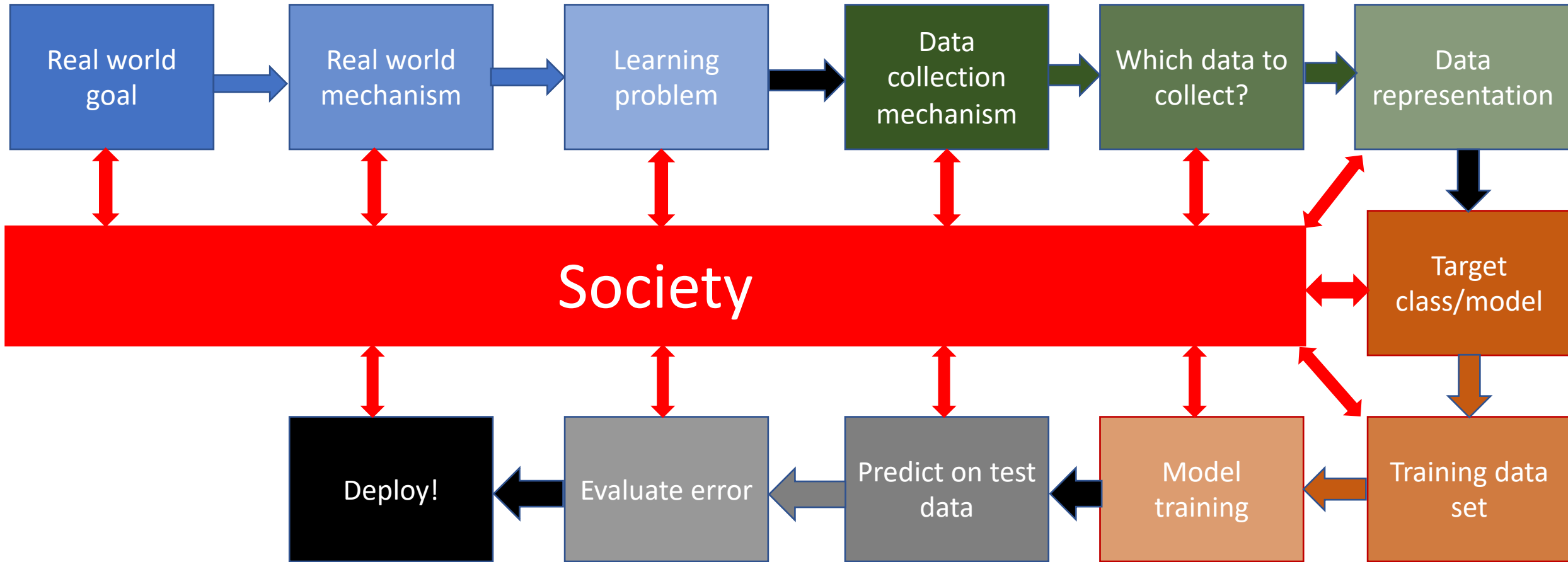
Slide by Kenny Joseph



Real world goal



What is missing?



Not the only ML+society pipeline in town

INSIDE AI

Black-Boxed Politics:

Opacity is a Choice in AI Systems



Katarzyna Szymielewicz [Follow](#)

Jan 17 · 23 min read

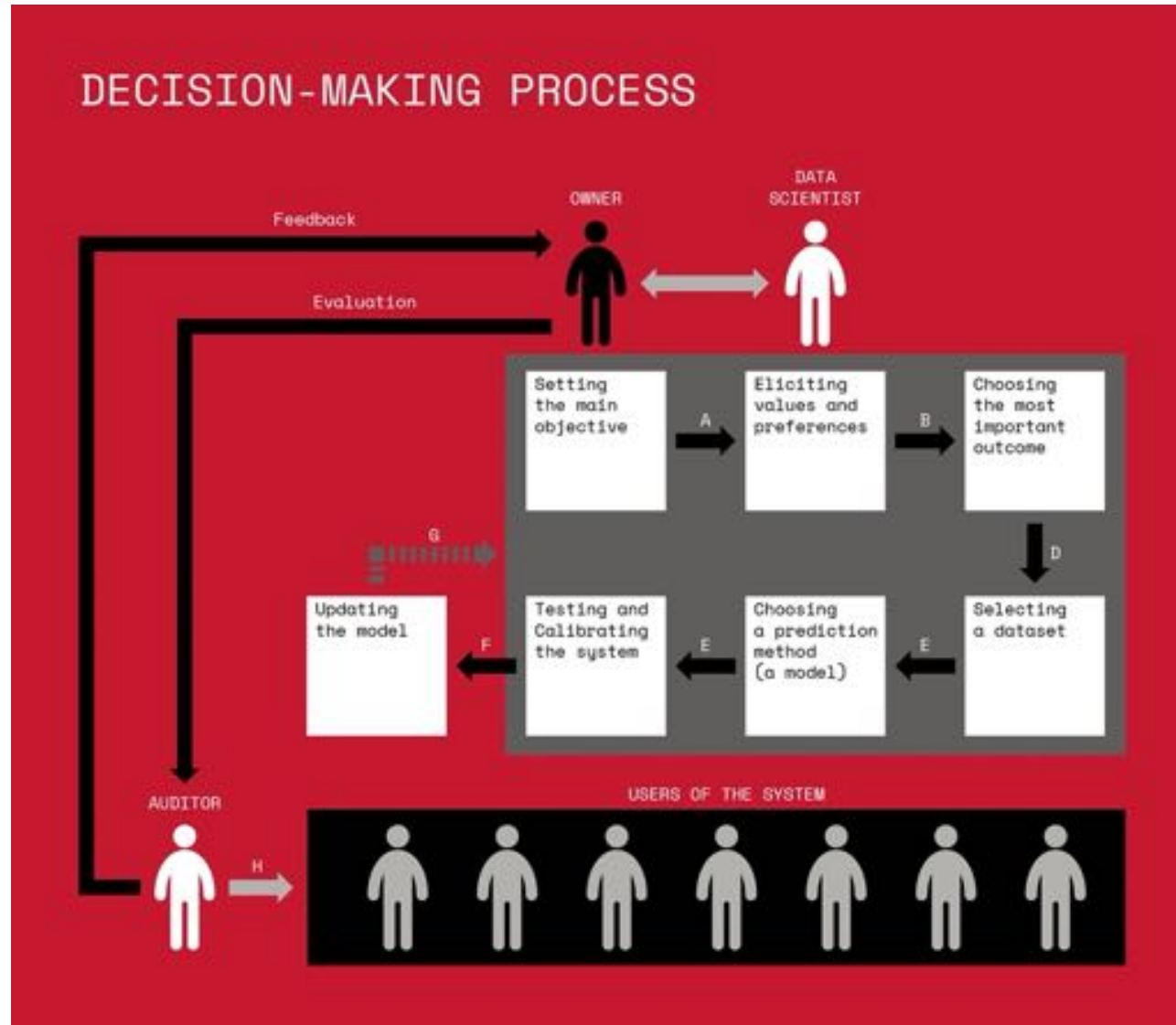


Written by: [Agata Foryciarz](#), [Daniel Leufer](#), [Katarzyna Szymielewicz](#)

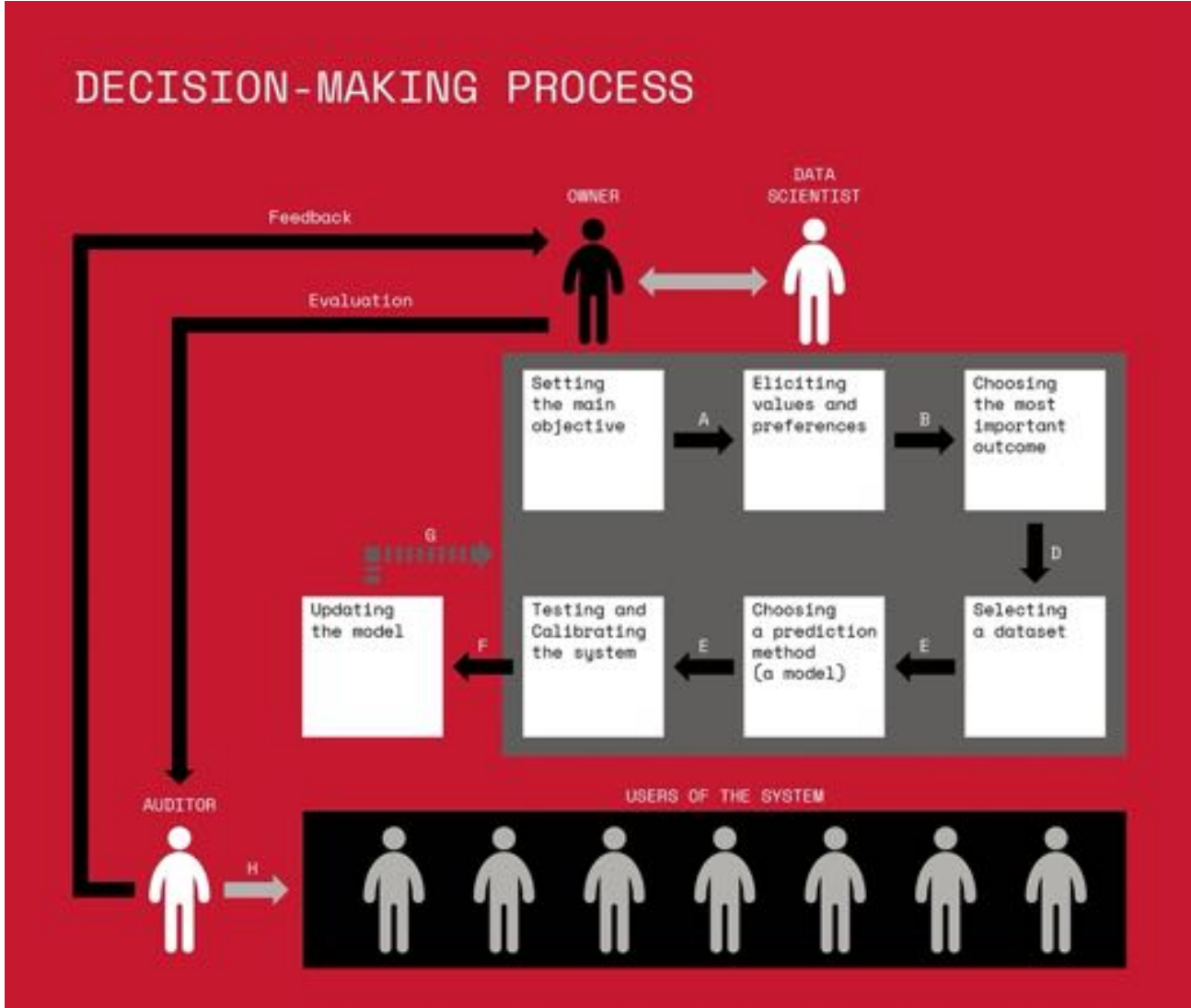
Illustrations by: [Olek Modzelewski](#)

Artificial intelligence captures our imagination like almost no other technology: from fears about killer robots to dreams of a fully-automated, frictionless future. As numerous authors have documented, the idea of creating artificial, intelligent machines has entranced and scandalized people for millennia. Indeed, part of what makes the history of ‘artificial intelligence’ so fascinating is the mix of genuine scientific achievement with myth-making and outright deception.

Not the only ML+society pipeline in town



A walkthrough



Step	Description	Key Considerations
01	Setting the main objective The decision made by the owner of the system, or the system itself, is the starting point for the entire process. It is crucial to define the objective clearly and ensure it aligns with the overall goals of the organization. This is a high-level decision that sets the direction for the entire system.	Search for clarity, specificity and feasibility. Consider the impact of the objective on the system and the organization.
02	Eliciting values and preferences This stage involves understanding the values and preferences of the stakeholders involved in the system. This includes the owner, the data scientist, and the users of the system. It is important to gather this information early in the process to ensure the system is designed to meet their needs.	Use structured methods to gather and analyze stakeholder input. Consider the impact of the system on the organization and the users. Engage stakeholders throughout the process.
03	Choosing the most important outcome ("What is the system for?") In the early stages of the process, the owner and the data scientist must agree on the most important outcome of the system. This is a high-level decision that sets the direction for the entire system.	Search for clarity, specificity and feasibility. Consider the impact of the outcome on the system and the organization.
04	Selecting a dataset The data scientist must select a dataset that is relevant to the problem and that is of high quality. This involves understanding the data source, the data format, and the data quality. It is important to ensure the dataset is representative of the real world.	Search for clarity, specificity and feasibility. Consider the impact of the dataset on the system and the organization.
05	Choosing a prediction method (a model) The data scientist must choose a prediction method that is appropriate for the problem and the dataset. This involves understanding the different methods and their strengths and weaknesses. It is important to choose a method that is both accurate and interpretable.	Search for clarity, specificity and feasibility. Consider the impact of the method on the system and the organization.
06	Testing and Calibrating the system The system must be tested and calibrated to ensure it is accurate and reliable. This involves running the system on a variety of data and comparing the results to the expected outcomes. It is important to iterate on the system until it is performing well.	Search for clarity, specificity and feasibility. Consider the impact of the testing and calibration on the system and the organization.
07	Updating the model The system must be updated regularly to ensure it remains accurate and reliable. This involves gathering new data and retraining the model. It is important to have a process in place for updating the model.	Search for clarity, specificity and feasibility. Consider the impact of the updating on the system and the organization.
08	Evaluating before deployment The system must be evaluated before deployment to ensure it is ready for use. This involves running the system on a variety of data and comparing the results to the expected outcomes. It is important to ensure the system is performing well before it is deployed.	Search for clarity, specificity and feasibility. Consider the impact of the evaluation on the system and the organization.

Pass-phrase for today: **Katarzyna Szymielewicz**

Katarzyna Szymielewicz

President

Panoptikon Foundation



tweet



share



share



share

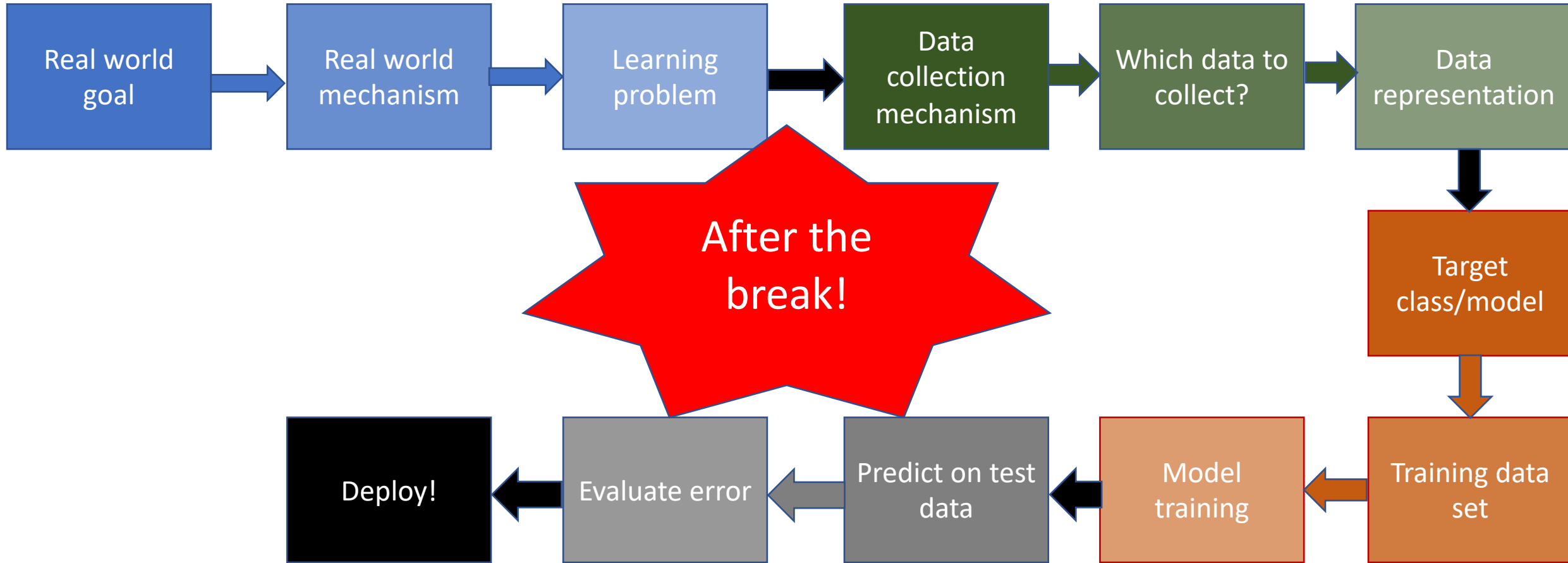


share



Expert in human rights and technology, lawyer and activist. Co-founder and president of Panoptikon Foundation – Polish NGO defending human rights in surveillance society. Since 2012 vice-president of European Digital Rights. Graduate of the University of Warsaw (Law) and the School of Oriental and African Studies (Development Studies). Stipendist and member of Ashoka – international network of social entrepreneurs. Her work exposes the invisible: data exploitation happening behind friendly, commercial interfaces, the fallacy of free choice and political trade-offs coming with security narrative.

A walkthrough?



Next Thursday

Th, Feb 10

Impact of Systemic Racism (**Class discussion**)

Watching Assignment: [Are We Automating Racism? \(Glad You Asked S2 E2\)](#) ↗

[Does My Neighborhood Determine My Future? \(Glad You Asked S2 E3\)](#) ↗

[Is Meritocracy a Myth? \(Glad You Asked S2 E4\)](#) ↗

(Project choice due by 5pm)

Discussion Summary

In-class discussions

In-class discussions will be based on a paper, a video, and/or a podcast. The paper/video/podcast(s) will be assigned at least a week in advance of the in-class discussion. **By default you are supposed to read/watch/listen the entire paper/video/podcast** (for each reading assignment we will post on Piazza on what exactly we expect y'all to read). Further, y'all are supposed to read/watch/listen **BEFORE** coming to the in-class discussion. In the spirit of trust but verify, y'all will have to submit a discussion summary **before** the class (for more details on this, see below). During the class, everyone is expected to actively participate in the class discussion on the assigned reading (for more details on this, please see below.)

There is no "right" answer

As y'all will see in many parts of the course there will not be a "right" answer. This is more so in the case of the in-class discussions. The discussion are not for you to say what you think / want you to say but they are an opportunity for me (and the rest of the class) to hear what **YOU** think about the topic. So please participate accordingly!

Grading

Each in-class discussion is worth 5% of your final grade (split equally between the discussion summary and participation). We expect there to be five in-class discussions. (If we end up having six class discussions, then the points for the final discussion will contribute to the Bonus part of the grade.)

What goes into a discussion summary?

Discussion Summary

For each in-class discussion (see the [schedule](#) for the dates), you will submit a summary of what you read. Your submission should have three parts:

- **Thoughts** What did this paper/video/podcast make you think about? What were the specific parts of the paper/video/podcast that made you think that? What were the main strengths/weaknesses of the paper/video/podcast? What did you like/dislike, and why?
- **Questions** What didn't you understand? What choices did the author make that you didn't understand/agree with? What were the aspects of the paper/video/podcast that you thought it got wrong?
- **Epiphanies** Does this paper/video/podcast help you think in a new way about a problem you're working on? Is there a part of the paper/video/podcast you found particularly confusing that you'd like help understanding? How does this paper/video/podcast link to some of the other papers/videos/podcasts we have discussed or other concepts you've learned in class?

Submitting the discussion summary

Your submission is due as a PDF of at most one(1) page on [Autolab](#). The submission is due by 5pm of the day BEFORE the in-class discussion. You must submit a discussion summary for all the items as a whole if there is more than one assigned (if there are multiple items then they would be fairly closely related to each other).

Discussion summary grading rubric

Here is the split of grades for the various parts of discussion summary (for a total of **100 points**):

- **Thoughts** 30 points.
- **Questions** 30 points.
- **Epiphanies** 40 points.

Have you heard of COMPAS?

COMPAS (software)

From Wikipedia, the free encyclopedia

COMPAS, an acronym for *Correctional Offender Management Profiling for Alternative Sanctions*, is a case management Equivalent^[g] used by U.S. courts to assess the likelihood of a defendant becoming a recidivist.^{[1][2]}

COMPAS has been used by the U.S. states of New York, Wisconsin, California, Florida's Broward County, and oth

Contents [hide]

- [1 Risk Assessment](#)
- [2 Critiques and legal rulings](#)
- [3 Accuracy](#)
- [4 Further reading](#)
- [5 See also](#)
- [6 References](#)

Risk Assessment [[edit](#)]



Broward County

County in Florida

Broward County is a county in southeastern Florida, US. According to a 2018 census report, the county had a population of 1,951,260, making it the second-most populous county in the state of Florida and the 17th-most populous county in the United States. The county seat is Fort Lauderdale. [Wikipedia](#)

Incorporated cities: 24

Population: 1.936 million (2017)

Mayor: [Mark D. Bogen](#)

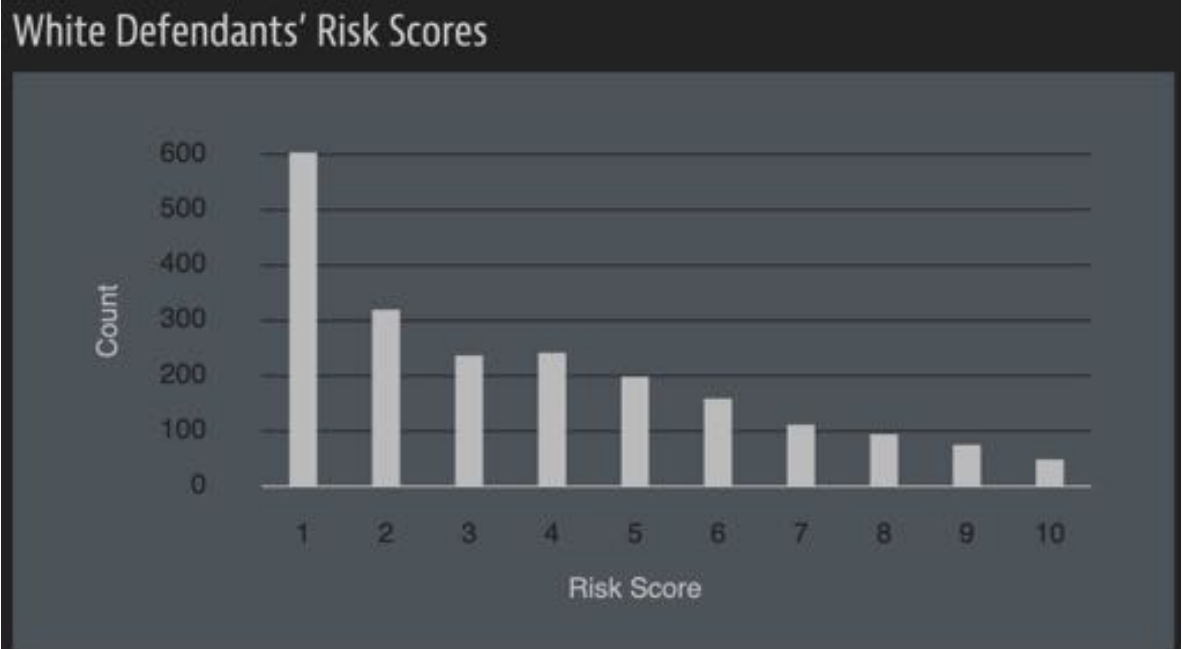
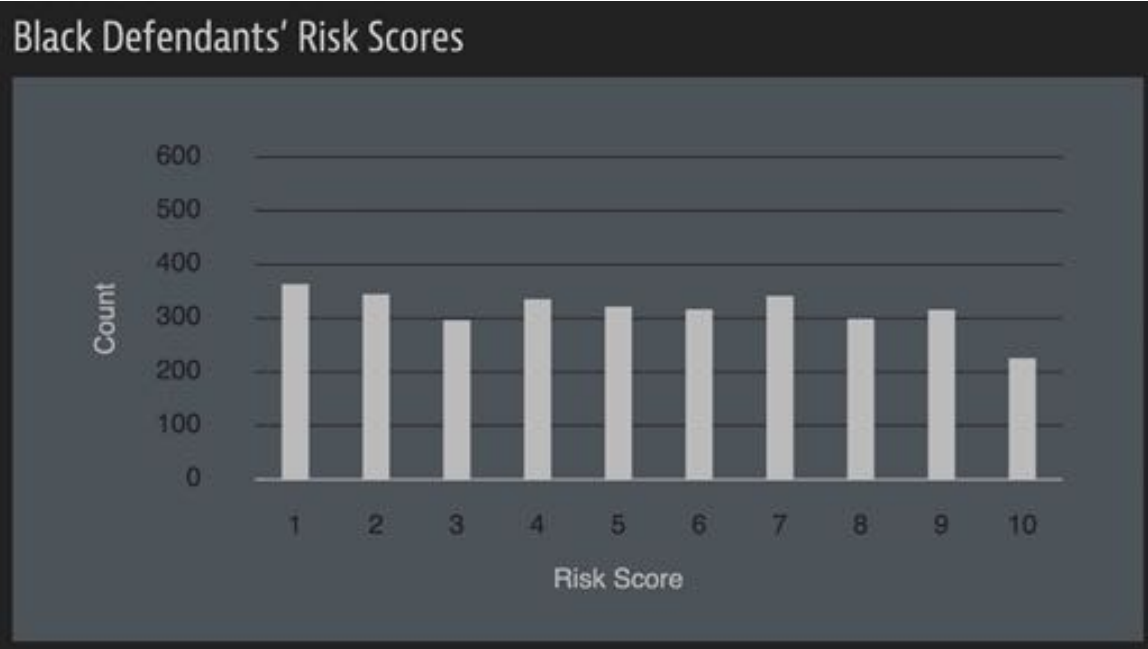
Machine Bias

There's software used across the country to predict future criminals. And it's biased against blacks.

by Julia Angwin, Jeff Larson, Surya Mattu and Lauren Kirchner, ProPublica

May 23, 2016

A sample of their result



False Positives, False Negatives, and False Analyses: A Rejoinder to "Machine Bias: There's Software Used Across the Country to Predict Future Criminals. And It's Biased Against Blacks."

Anthony W. Flores

California State University, Bakersfield

Kristin Bechtel

Crime and Justice Institute at CRJ

Christopher T. Lowenkamp

Administrative Office of the United States Courts

Probation and Pretrial Services Office

