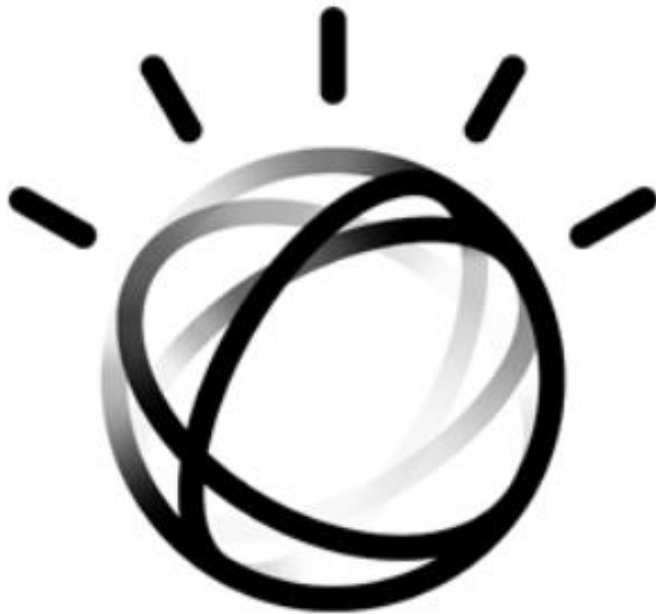

I SPY AI

A JEOPARDY GAME ON ARTIFICIAL INTELLIGENCE



MS. DEE

@DEEPSTEM

DEEPSTEM.WORDPRESS.COM

July 30, 2020

SWENext PittsburghVirtual Event

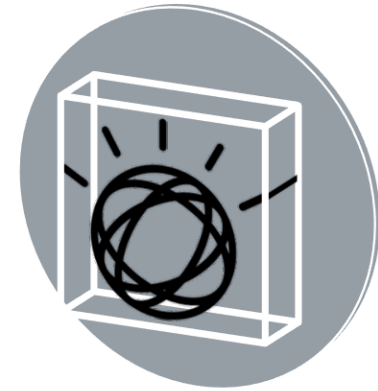
ABOUT ME



COMPUTER ENGINEER



PRODUCT
MANAGEMENT



AI

Mary Zeis
Chat Coordinator
VP Outreach, Society
of Women Engineers

Shriya K.
Audio Engineer and
Support Coordinator
Rising 9th Grader

Rishi K.
Scorekeeper and
Support Coordinator
Rising 4th Grader

YOUR SWE TEAM

ZOOM ETIQUETTE



KEEP YOUR VIDEO ON –
WE NEED TO SEE YOU!



STAY MUTED UNTIL YOU
NEED TO TALK



USE “RAISE HANDS” TO
ASK A QUESTION



WE WILL RENAME YOU
ON ZOOM WHEN WE
BREAK OUT INTO TEAMS

LET'S GET TO
KNOW EACH
OTHER!

Your Name

Your "Rising"
Grade &
School

Coollest
Technology



WHAT IS ARTIFICIAL INTELLIGENCE?

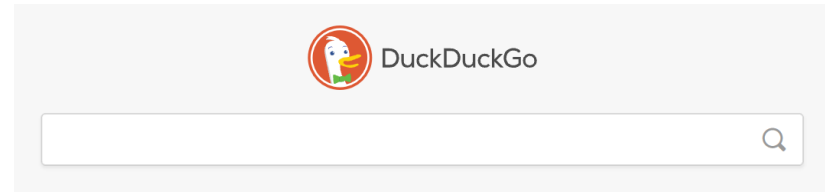
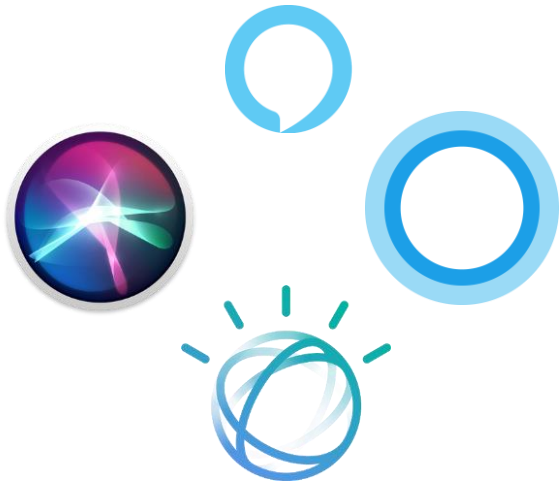
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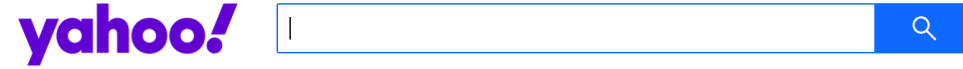
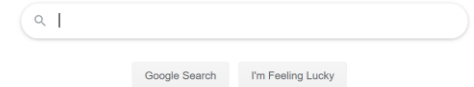
NETFLIX

Spotify

pandora

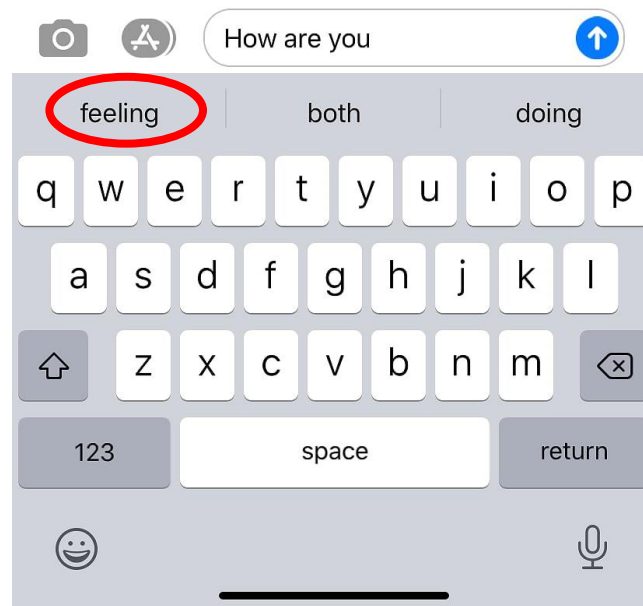


Google



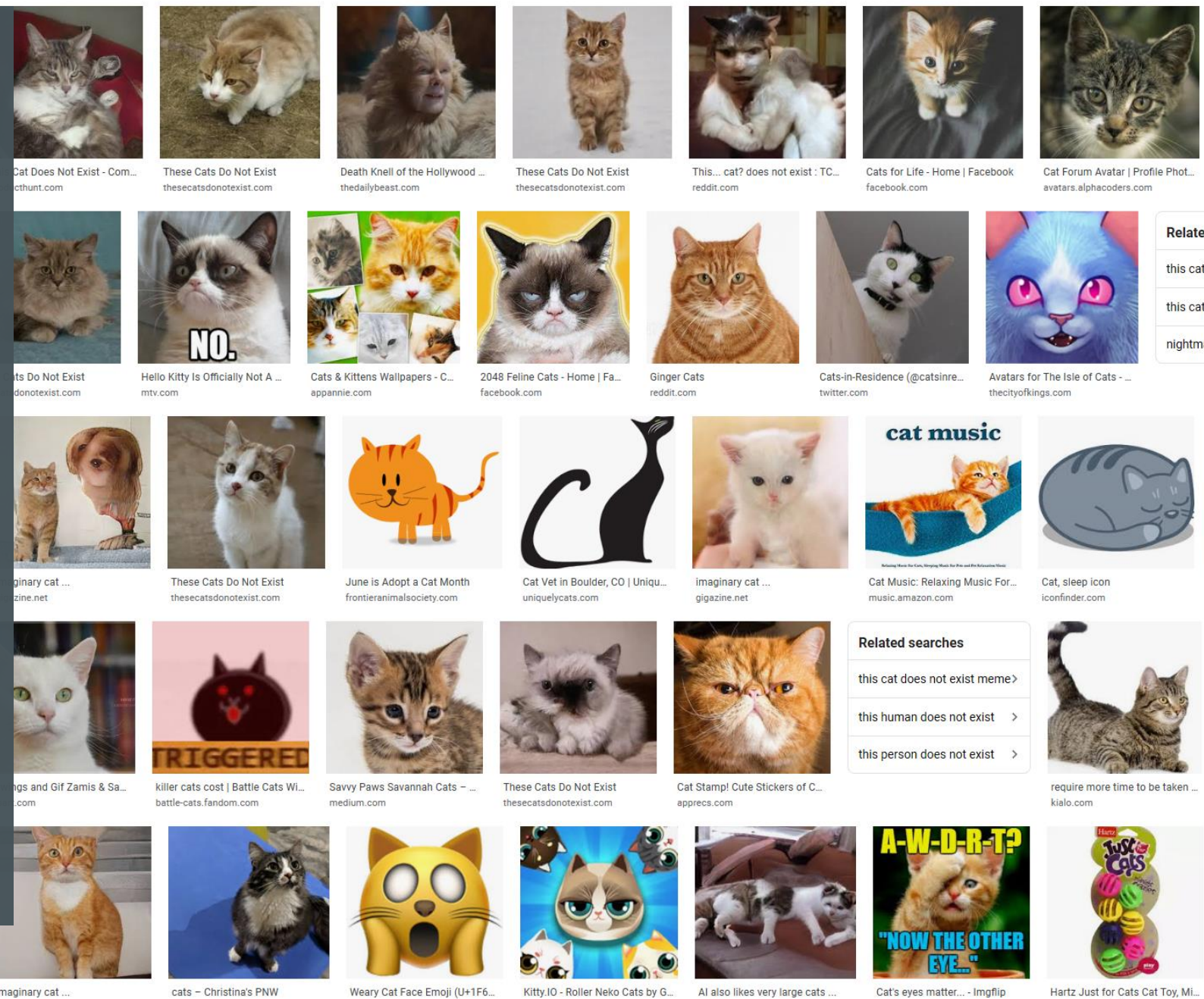
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A SIMPLIFIED VIEW OF AI TASKS



DATASET: COLLECTION OF DATA

- Measurements
- Text
- Images
- Audio Clips
- Videos
- ...

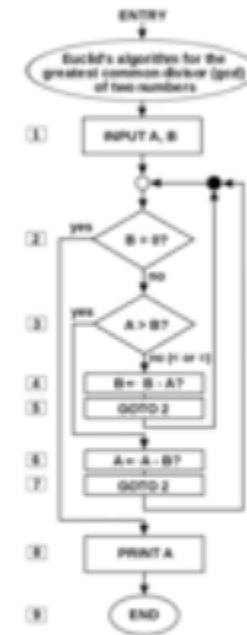


LEARNING ALGORITHM: WHAT IS AN ALGORITHM?

Algorithm

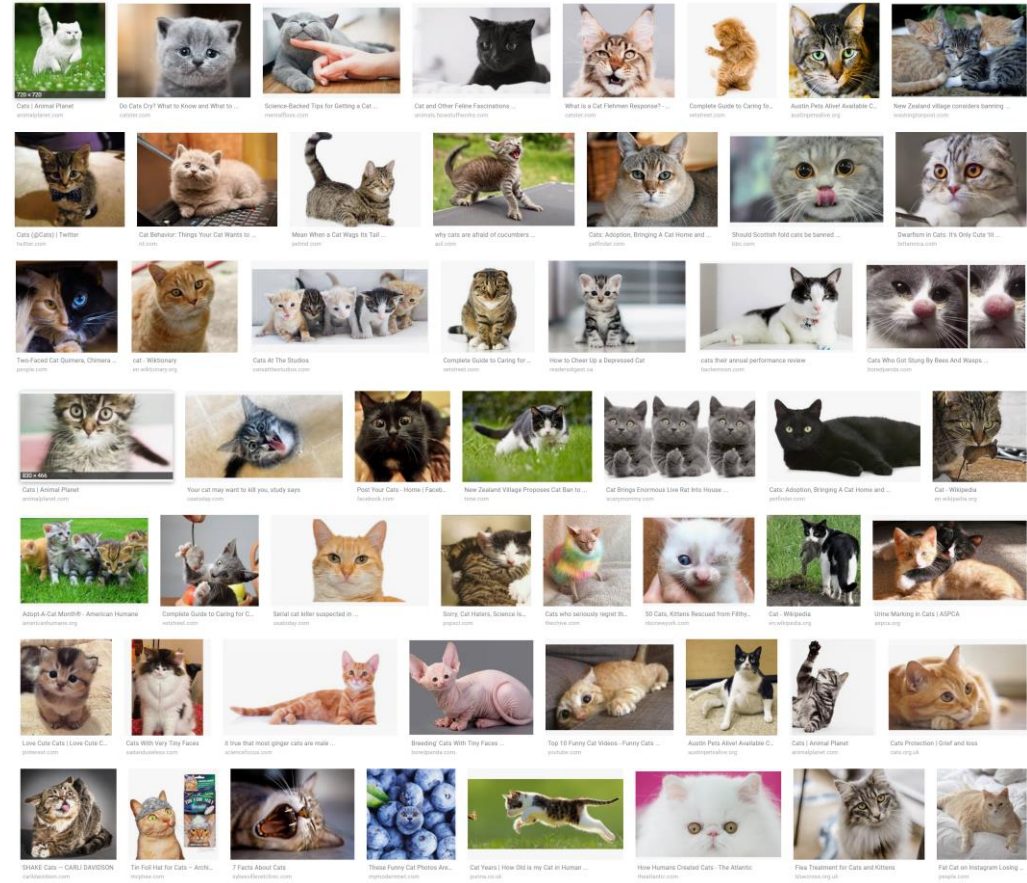
In mathematics and computer science, an algorithm is a finite sequence of well-defined, computer-implementable instructions, typically to solve a class of problems or to perform a computation.

Algorithms are always unambiguous and are used as specifications for performing calculations, data processing, automated reasoning, and other tasks. [Wikipedia](#)

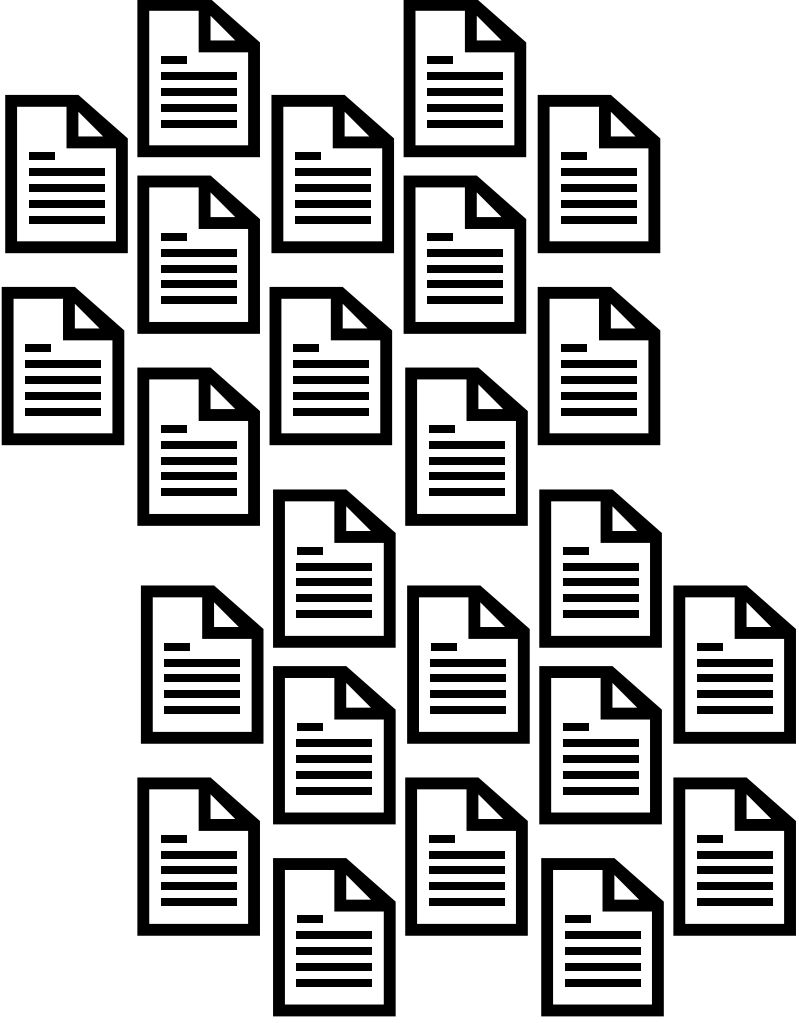


MACHINE LEARNING

LEARNING
HOW TO
PERFORM A
TASK FROM A
COLLECTION
OF EXAMPLES



Images from Google Search for "cats"



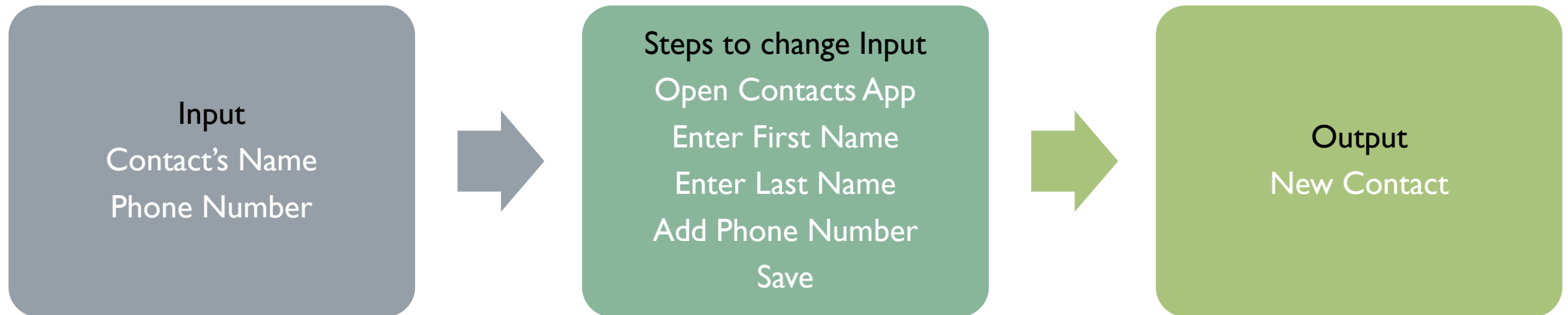
ANATOMY OF A LEARNING ALGORITHM



EXAMPLE OF A LEARNING ALGORITHM



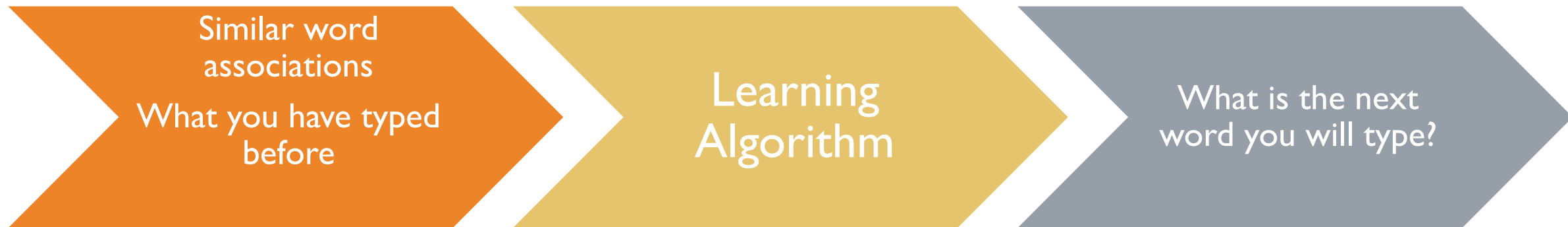
Task: How do you add a new contact to your phone?



EXAMPLE OF AN AI TASK



Task: How does your keyboard Autocomplete words?



EXAMPLE OF AN AI TASK



Task: How do you personalize ads on Instagram?



WHO HAS
PLAYED
JEOPARDY?



Game



Teams



Scores



The first team will pick a category and a point value on the board to see a question



Each question describes a prediction and a dataset. The team needs to guess the AI task



The team earns points if they answer correctly



The turn passes to the next team for the next question




The team with most points at the end of the game wins



Are you ready to SPY AI?

LET'S PLAY JEOPARDY!



Web	App	Email	Image	Music & Travel	Any
<u>\$200</u>	<u>\$200</u>	<u>\$200</u>	<u>\$200</u>	<u>\$200</u>	<u>\$200</u>
<u>\$400</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>	<u>\$400</u>
<u>\$600</u>	<u>\$600</u>	<u>\$600</u>	<u>\$600</u>	<u>\$600</u>	<u>\$600</u>
<u>\$800</u>	<u>\$800</u>	<u>\$800</u>	<u>\$800</u>	<u>\$800</u>	<u>\$800</u>
<u>\$1000</u>	<u>\$1000</u>	<u>\$1000</u>	<u>\$1000</u>	<u>\$1000</u>	<u>\$1000</u>

WEB : 200

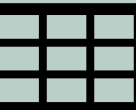
SEARCH THE INTERNET (GOOGLE)

DATASET

Past searches and links
you have clicked

PREDICTION

What personalized
search results you will
see



WEB : 400

SEARCH FOR A PRODUCT (AMAZON)

DATASET

Examples of product
names and
characteristics

PREDICTION

Which product you
wanted to find



WEB : 600

RECEIVE PRODUCT RECOMMENDATIONS (AMAZON)

DATASET

Products that people
have bought together
in the past

PREDICTION

What product might go
well with what you are
buying



WEB : 800

USE SAFE SEARCH ON SEARCH ENGINES (BING)

DATASET

Examples of websites
that are safe and unsafe

PREDICTION

Whether the site you
are clicking on is safe



WEB : 1000

USE PREDICTIVE SEARCH ON SEARCH ENGINES (GOOGLE)

DATASET

Past searches of people
who share your
interests

PREDICTION

What you intended to
search after the first
words



APP : 200

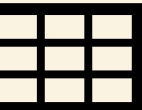
AUTOCORRECT SPELLING WHILE TYPING (WORD)

DATASET

Examples of how
people misspell words

PREDICTION

What is the word you
are trying to type



APP : 400

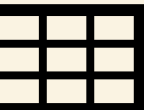
GET MOVIE RECOMMENDATIONS (NETFLIX)

DATASET

Past movies that you
have watched
completely

PREDICTION

Which movies you may
like next



APP : 600

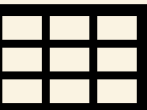
RECOMMEND SIMILAR BOOKS (GOODREADS)

DATASET

Books and Genres that
you may have read in
the past

PREDICTION

What books may
interest you next



APP : 800

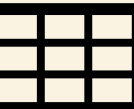
GET A WEATHER FORECAST (WEATHER APP)

DATASET

Past (historical)
weather data

PREDICTION

What is the weather in
the future



APP : 1000

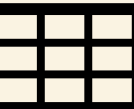
MAKE MOBILE DEPOSITS BY SCANNING CHECKS (PNC BANK)

DATASET

Examples of
handwriting on checks

PREDICTION

What is written on the
check



EMAIL : 200

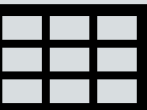
FILTER EMAIL SPAM MESSAGES (GMAIL)

DATASET

Examples of emails that
are spam and not

PREDICTION

Whether a new email
is spam



EMAIL : 400

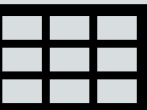
MARK SOME EMAILS AS IMPORTANT (GMAIL)

DATASET

Examples of whether
emails are important or
not

PREDICTION

Whether a new email
is important



EMAIL : 600

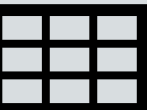
GET NEWS ARTICLE RECOMMENDATIONS (APPLE NEWS)

DATASET

News articles that you
have read in the past

PREDICTION

What news article may
interest you next



EMAIL : 800

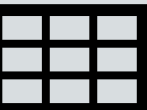
CLASSIFY EMAILS (GMAIL)

DATASET

Examples of emails that
are social or
promotional

PREDICTION

Whether a new email
is social or
promotional



EMAIL : 1000

USE SMART REPLY ON EMAIL (GMAIL)

DATASET

Past responses for
email messages

PREDICTION

What response you
might want to send

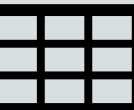


IMAGE : 200

CLICK A SHOPPING AD (INSTAGRAM)

DATASET

Examples of what
people bought based
on the instagram
accounts they follow

PREDICTION

What you might buy
based on what you
follow

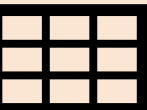


IMAGE : 400

RECOMMEND SIMILAR PINS (PINTEREST)

DATASET

Past items you have
pinned

PREDICTION

Which items you may
like next

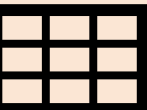


IMAGE : 600

TAG FACES OF PEOPLE (PHOTOS)

DATASET

Images of people's
faces

PREDICTION

Whose face is in the
image

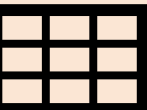


IMAGE : 800

USE A SNAPCHAT FILTER (SNAPCHAT)

DATASET

Examples of people's
faces

PREDICTION

Where do you want to
paste glasses on the
face

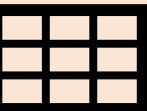


IMAGE : 1000

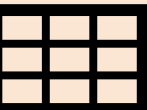
MAKE ANIMATED MEMOJIS (APPLE)

DATASET

Images of your face and
expressions on your
face

PREDICTION

What the memoji
should reflect



MUSIC & TRAVEL : 200

RECOMMEND SIMILAR MUSIC (SPOTIFY)

DATASET

Past songs that you
have listened to

PREDICTION

What songs may
interest you next



MUSIC & TRAVEL : 400

PREDICT ESTIMATED ARRIVAL TIME (MAPS)

DATASET

Past (historical) samples of time to reach the destination across routes and traffic situations

PREDICTION

When will you reach a destination



MUSIC & TRAVEL : 600

IDENTIFY POPULAR SONG (SHAZAM)

DATASET

Examples of song snippets in noisy environments

PREDICTION

What song you are listening to



MUSIC & TRAVEL : 800

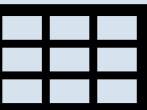
AVOID TRAFFIC (WAZE)

DATASET

Traffic patterns during different times across different routes

PREDICTION

Which route has the shortest time to travel



MUSIC & TRAVEL : 1000

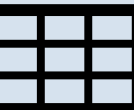
FIND A RIDESHARE (UBER)

DATASET

Drivers in the area
who are available

PREDICTION

Which driver to
connect to you



ANY : 200

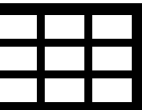
AUTOCOMPLETE TYPING (SMART KEYBOARDS)

DATASET

Examples of words or letters that are typed together

PREDICTION

What you will type next



ANY : 400

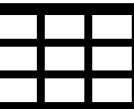
TRANSCRIBE VOICE TO TEXT (SMS APP)

DATASET

Transcribed audio
messages from people

PREDICTION

What is the text
message of what you
said



ANY : 600

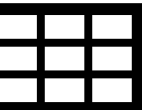
UNLOCK DEVICE USING FACIAL RECOGNITION (APPLE)

DATASET

Images of your face

PREDICTION

Whether the face is
yours



ANY : 800

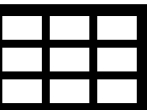
UNLOCK DEVICE USING YOUR FINGERPRINT (APPLE)

DATASET

Different impressions
of your fingerprint

PREDICTION

Whether the
fingerprint is yours



ANY : 1000

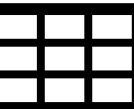
REPLACE WORDS LIKE “LOL” WITH AN EMOJI
(SMART KEYBOARDS)

DATASET

Potential meanings of
each emoji

PREDICTION

What is the best emoji
to replace your text



Can you recognize AI in action around you?

Did you learn something new?

Will you come back?

QUICK SURVEY: <https://forms.gle/AVPQ6HTjUhYM9VjJA>