

A hand holding a stack of Euro banknotes, with a world map overlaying the background. The hand is positioned on the left side of the frame, and the banknotes are stacked in the center. The world map is visible in the background, showing various countries and continents. The overall image has a blue and green color palette.

Democratizing Who Creates with AI

Stefania Druga

Founder Cognimates & HackIDemia



**WE BELIEVE KIDS SHOULD LEARN BY
INVENTING**



ENABLE CHILDREN TO BECOME CREATORS OF
TECHNOLOGY, ART AND SCIENCE

HACKIDEMIA

HACK THE CITY

.....
BUCURESTI





STRAWBERRY DNA



DIY MICROSCOPE



AIR QUALITY BALLOONS



MOSCILLATOR ORCHESTRA

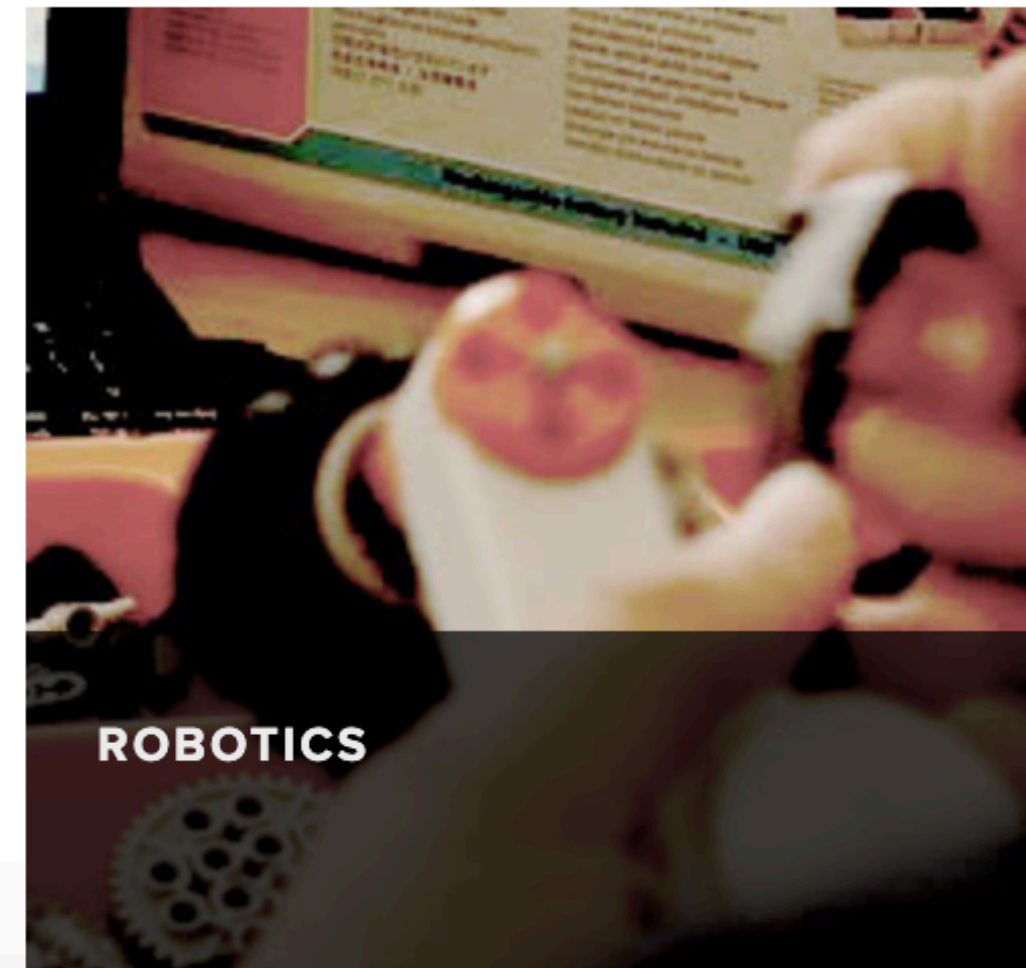
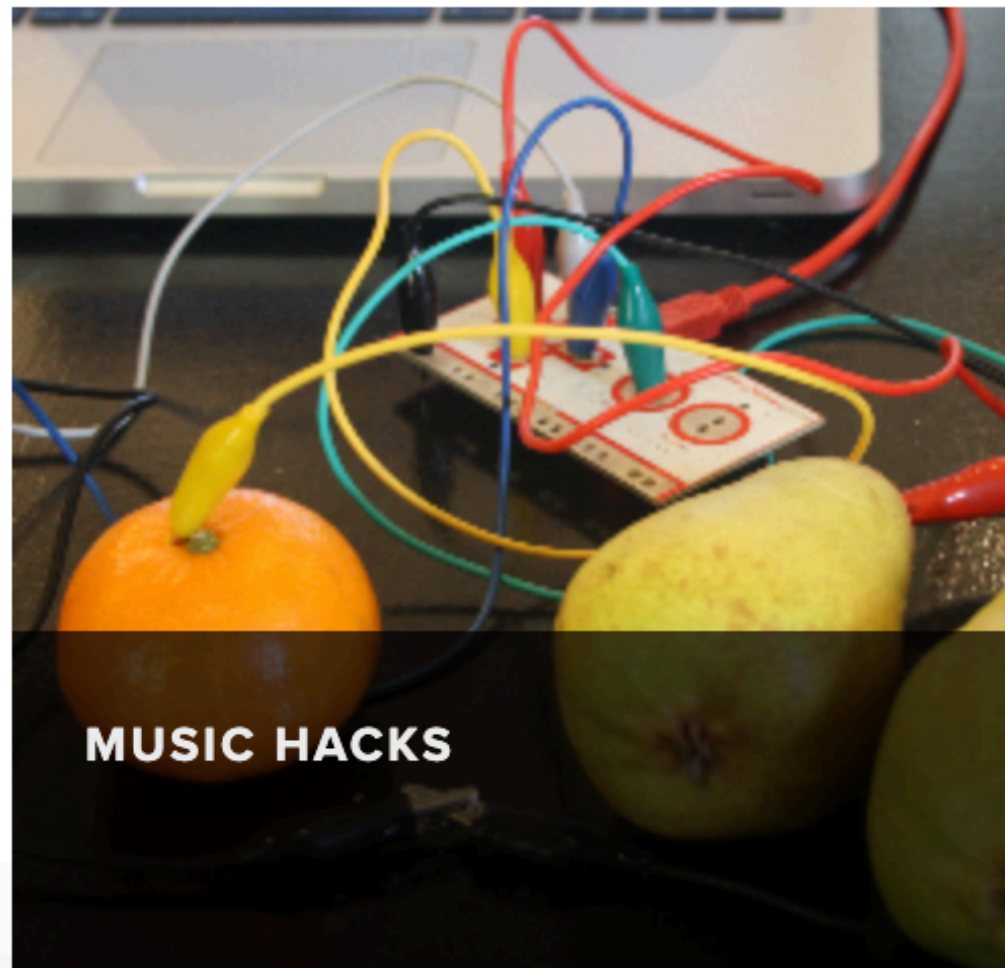
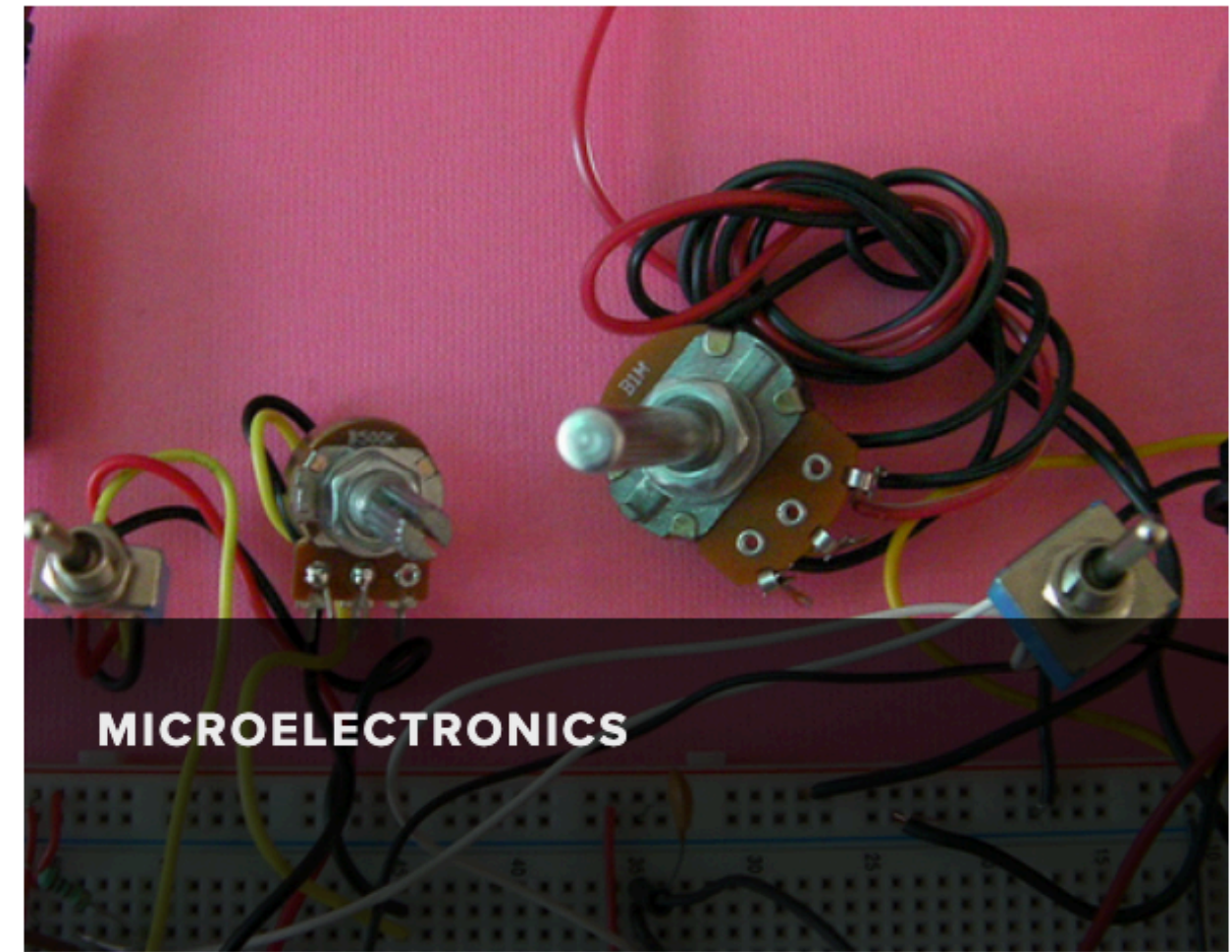


BACTERIA BATTERY



MATERIALS SUPERPOWERS

HACKIDEMIA EXAMPLE PROJECTS



HACKIDEMIA EXAMPLE PROJECTS

PROOF OF CONCEPT since August 2012

We've run over 400 workshops, worldwide, with teams already set-up throughout 15 countries in 25 cities.



Now children are growing up with AI



47 Million homes in US have a home assistant



AI for Kids ?

VPA for kids, Intelligent toys present in children homes
How do they interact with them? How should they be designed?

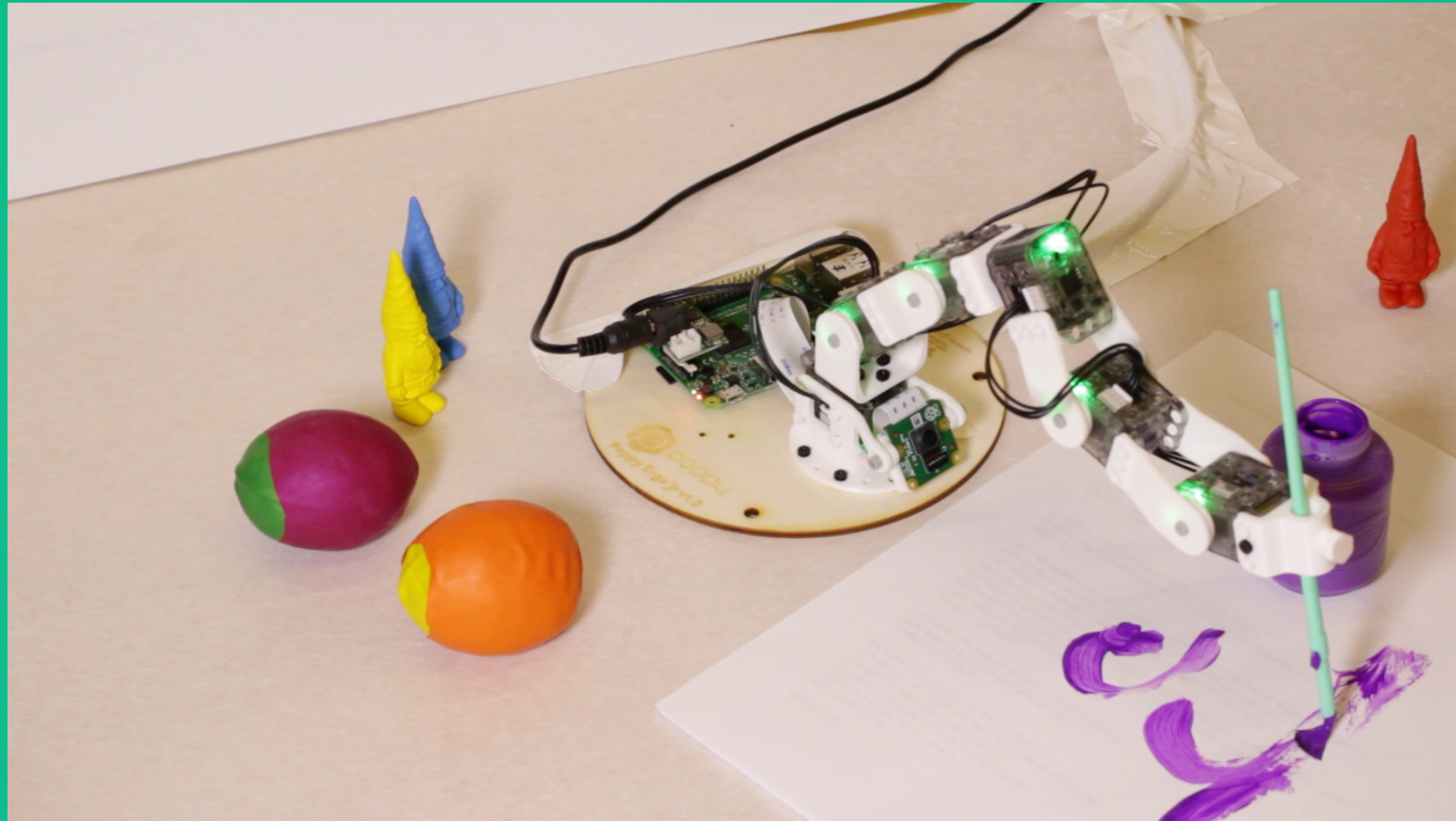


NY // NY
LATIROA
SCHOOLS
TAKE YOU

is Understands
me

The toy is like
a parent or
teacher

The toy is like
a friend

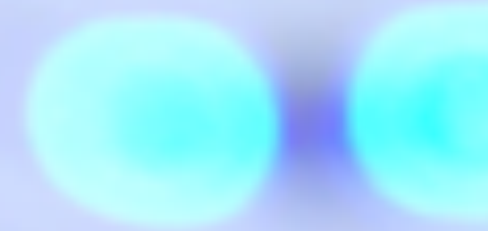


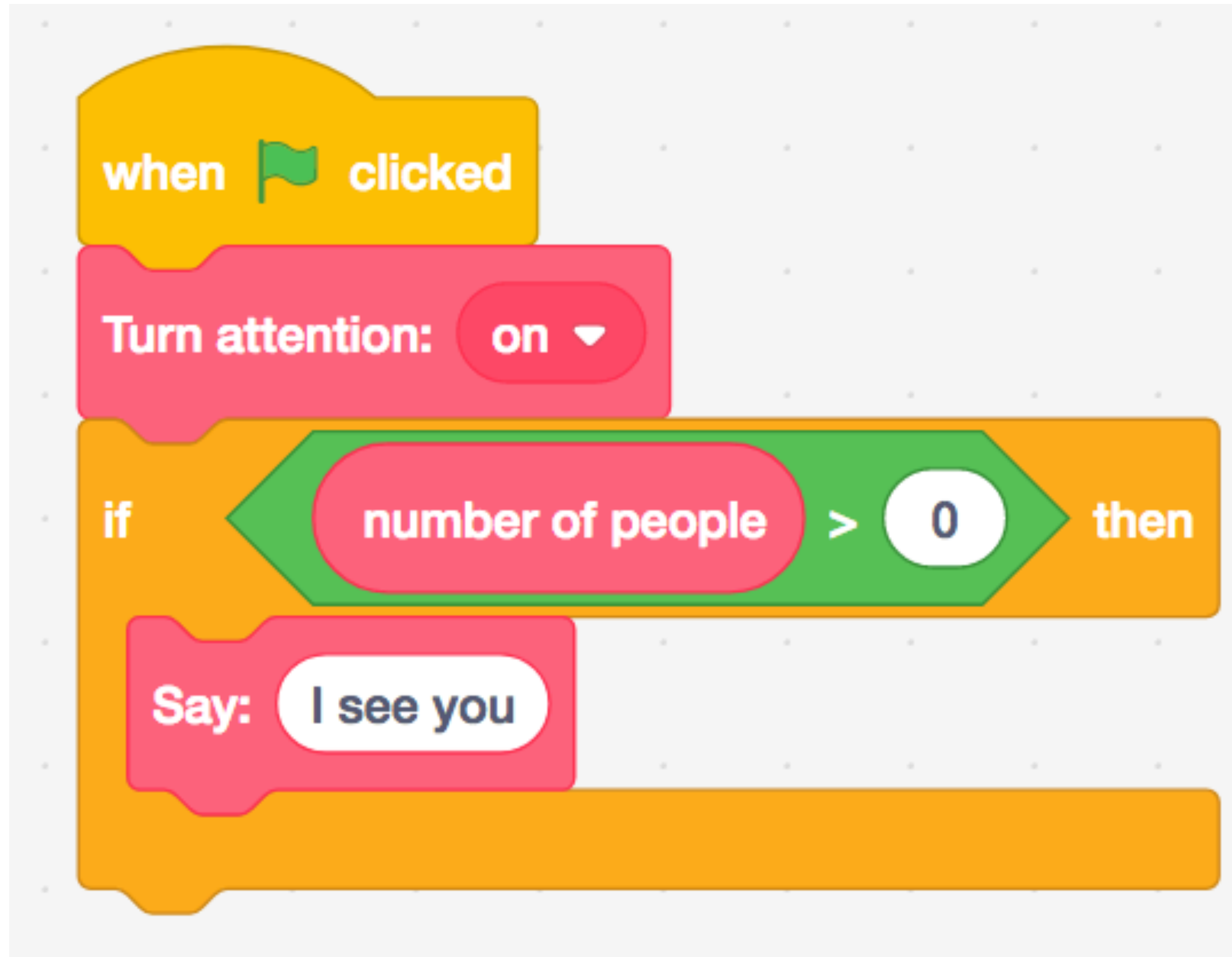
Extensions for AI Education

With Poppy Robot and Clarifai Extension children can program their own intelligent bot that can learn to play games, draw, recognize images.



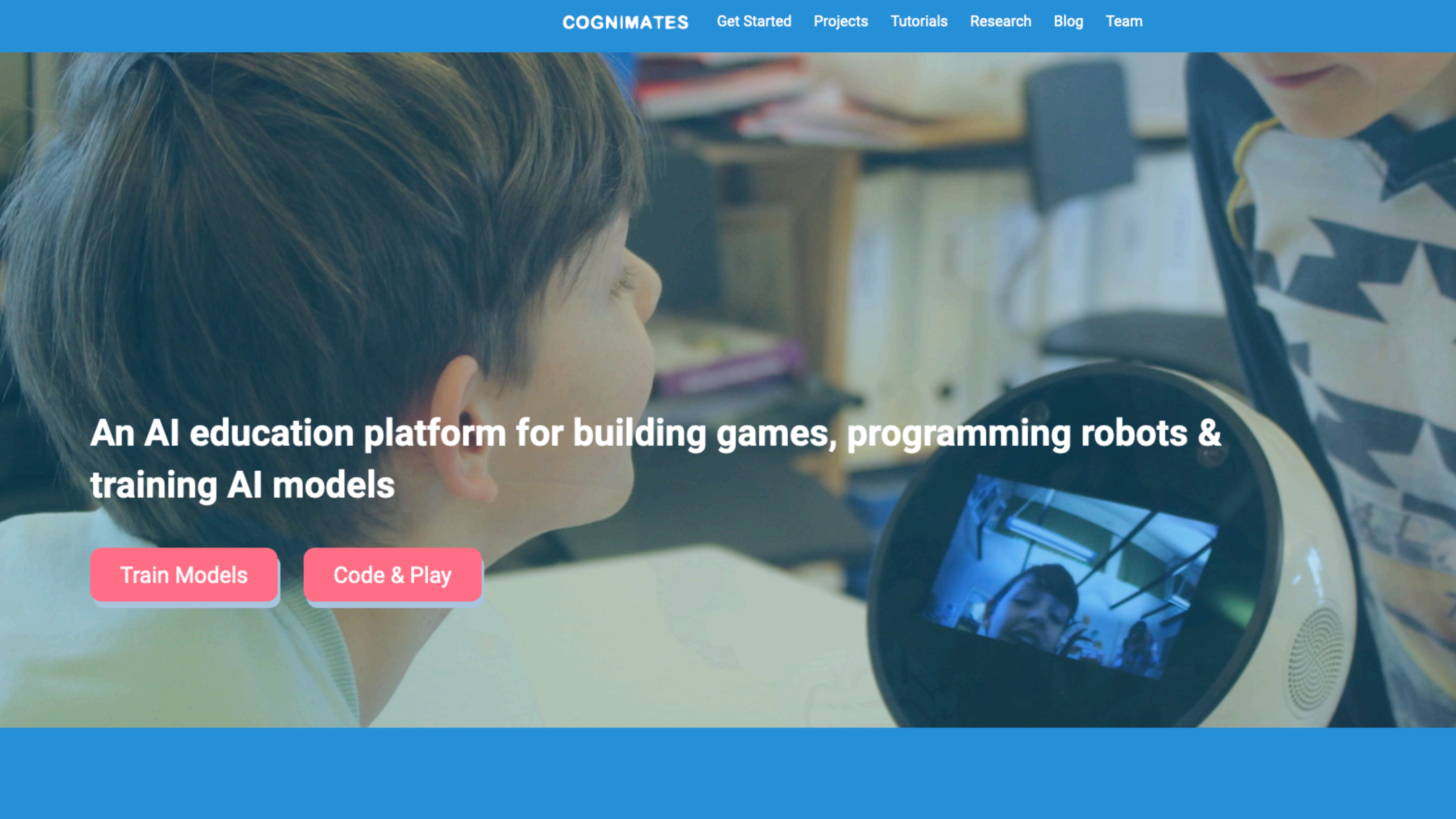
Cognimates: collaborative learning for families with intelligent agents





Cognimates: project example



A young girl with dark hair is looking intently at a small, white, spherical robot. The robot has a circular screen on its front that displays a video feed of the girl's face. The background is a blurred classroom setting with bookshelves and other people. The overall scene is overlaid with a semi-transparent blue filter.

An AI education platform for building games, programming robots & training AI models

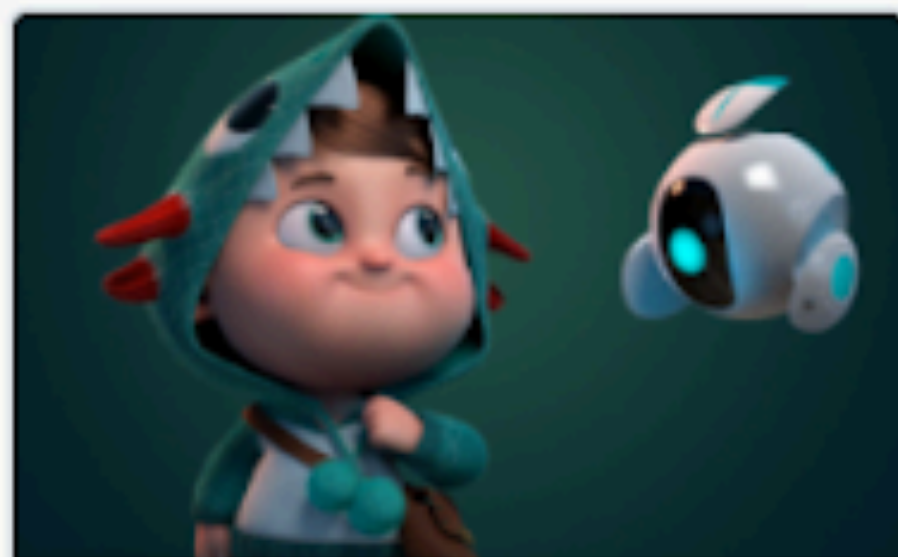
[Train Models](#)

[Code & Play](#)

cognimates.me

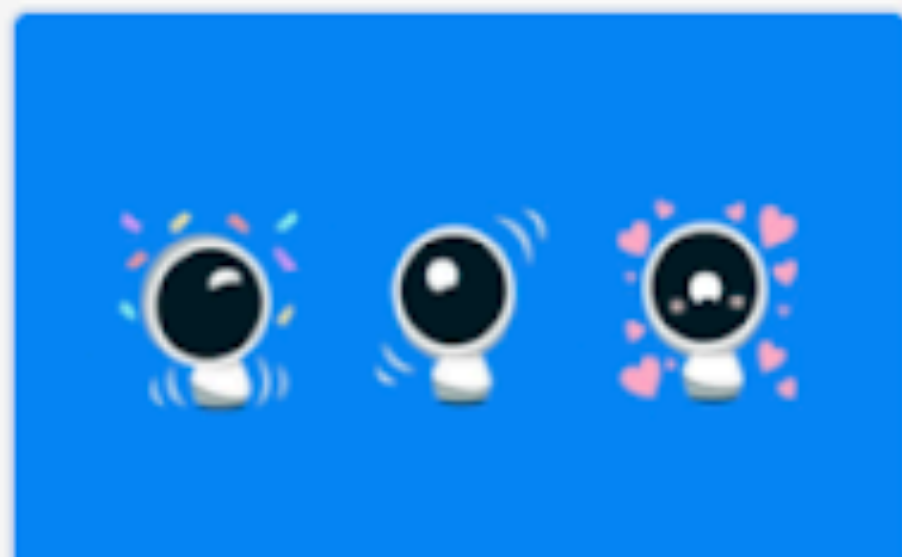
Q | what are you looking for?

Extension Library



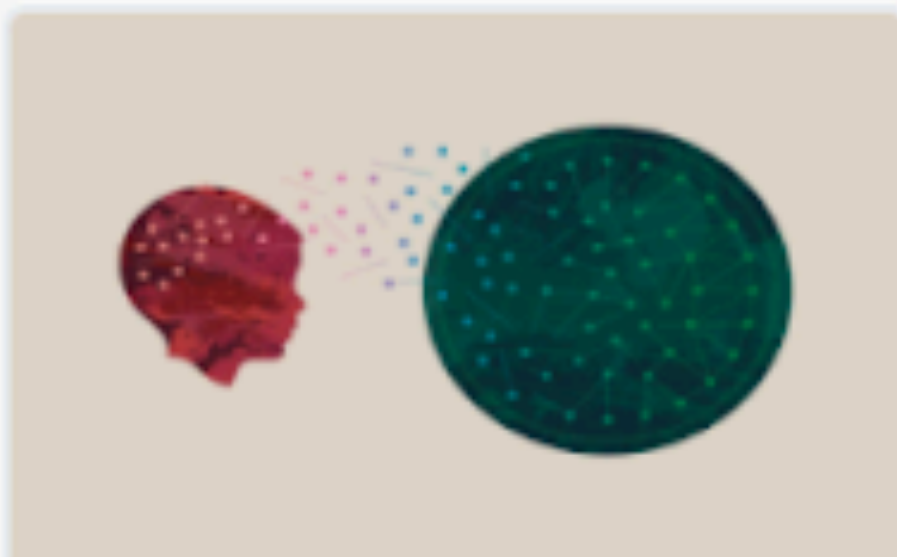
Cognimate

Your coding learning companion



Jibo

Control Jibo robot



Alexa

Teach Alexa new skills



Smart Lights

Control your home Hue Lights



Cozmo

Control Cozmo robot



Sentiment Analysis

Detect sentiment of your messages



ErgoJr Robot

Control ErgoJr robot



Image classification

Detect images from your camera



Circuit Playground

Change board LEDS and sounds



Microbit

Detect gestures and program display



Code Costumes Sounds

2 blocks

Feeling

- When text is positive
- When text is negative
- When text is neutral
- What is the feeling of the text: your t

Speech

- Say: hey
- Use Albert voice
- Start listening
- Stop listening
- When I hear hello
- Get latest speech

3 coding area

```

when clicked
  switch costume to NaryThinking
  ask Tell me a message! and wait
  say What is the feeling of the text: answer ?

  When text is negative
    switch costume to NarySad
  When text is positive
    switch costume to NaryHappy
  
```

Stage Backdrops

4 stage

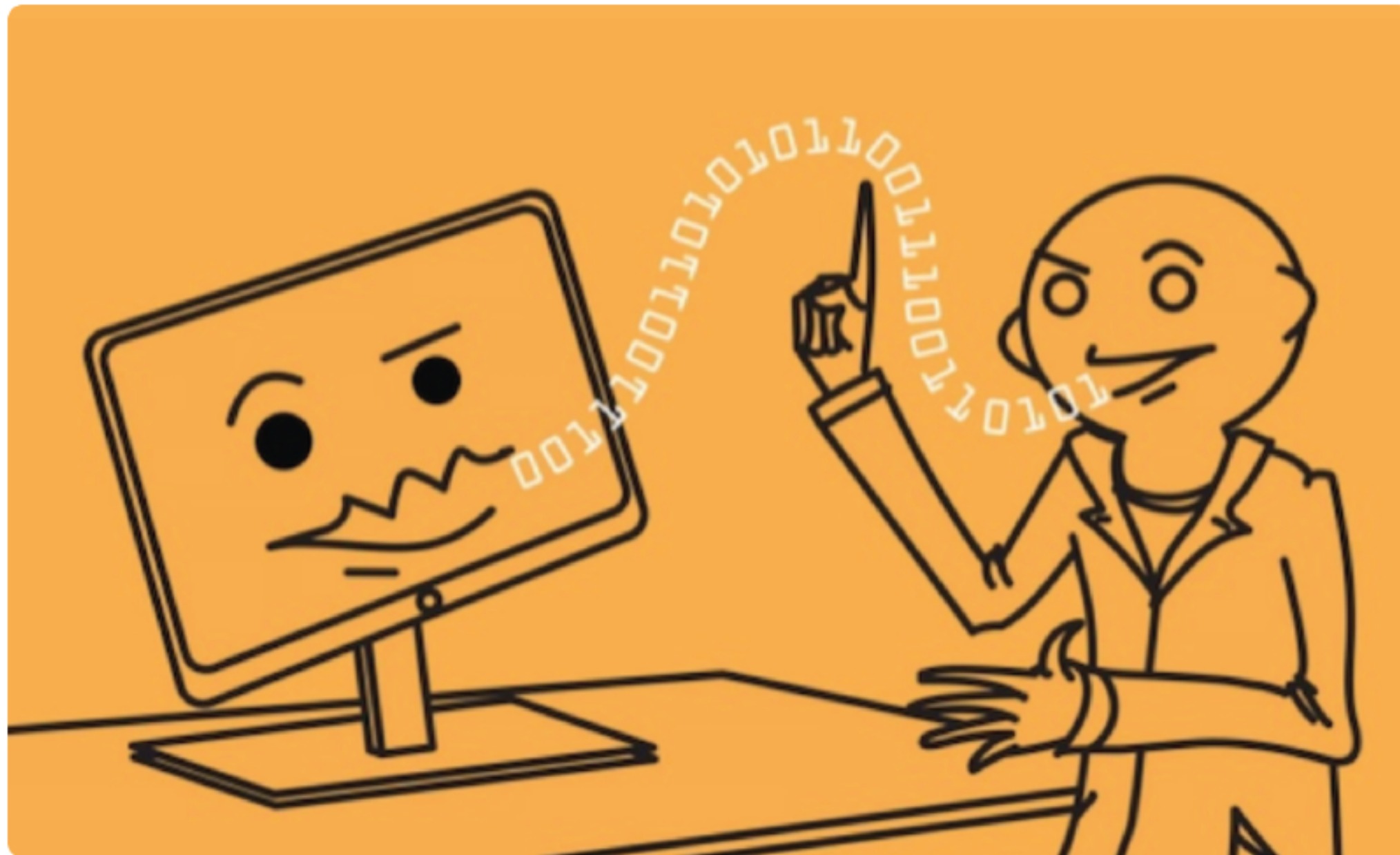
5 sprites menu

Sprite robot-03 x 18 y -34

Show Size 100 Direction 90

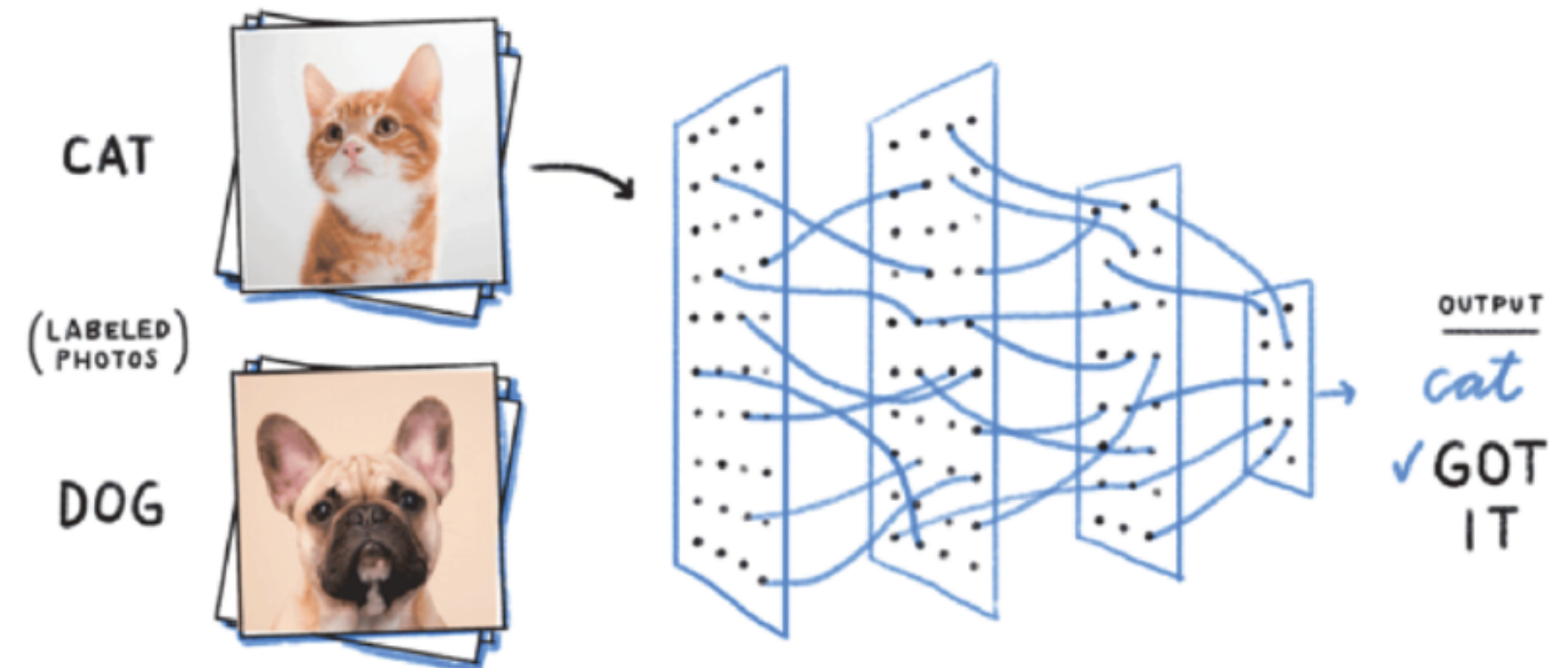
Backdrops 3

Training page



Teach it to recognize Text

Teach it to recognize Text



Teach it to recognize Images

Teach it to recognize Images

My vision model

Make at least 2 categories. Click on the category to add examples to it.

Teach me!

Add your category here

Cat

Add examples Remove

Dog

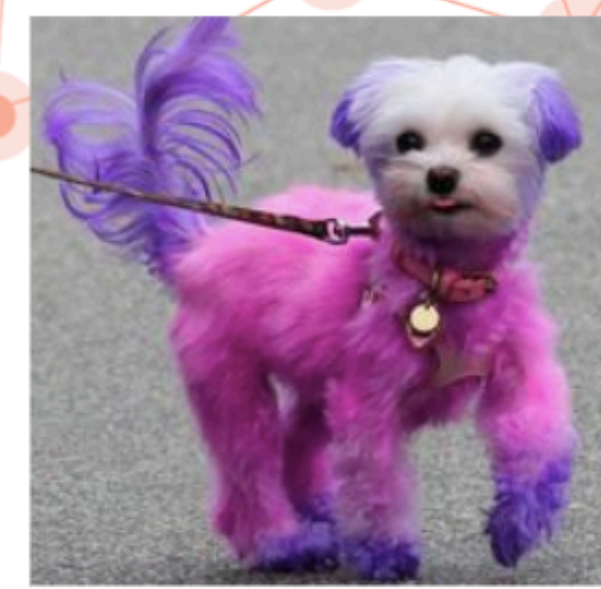
Add examples Remove

Other

Add examples Remove

Example curriculum

Based on the patterns, if you had to find dogs in the future, which would you choose?



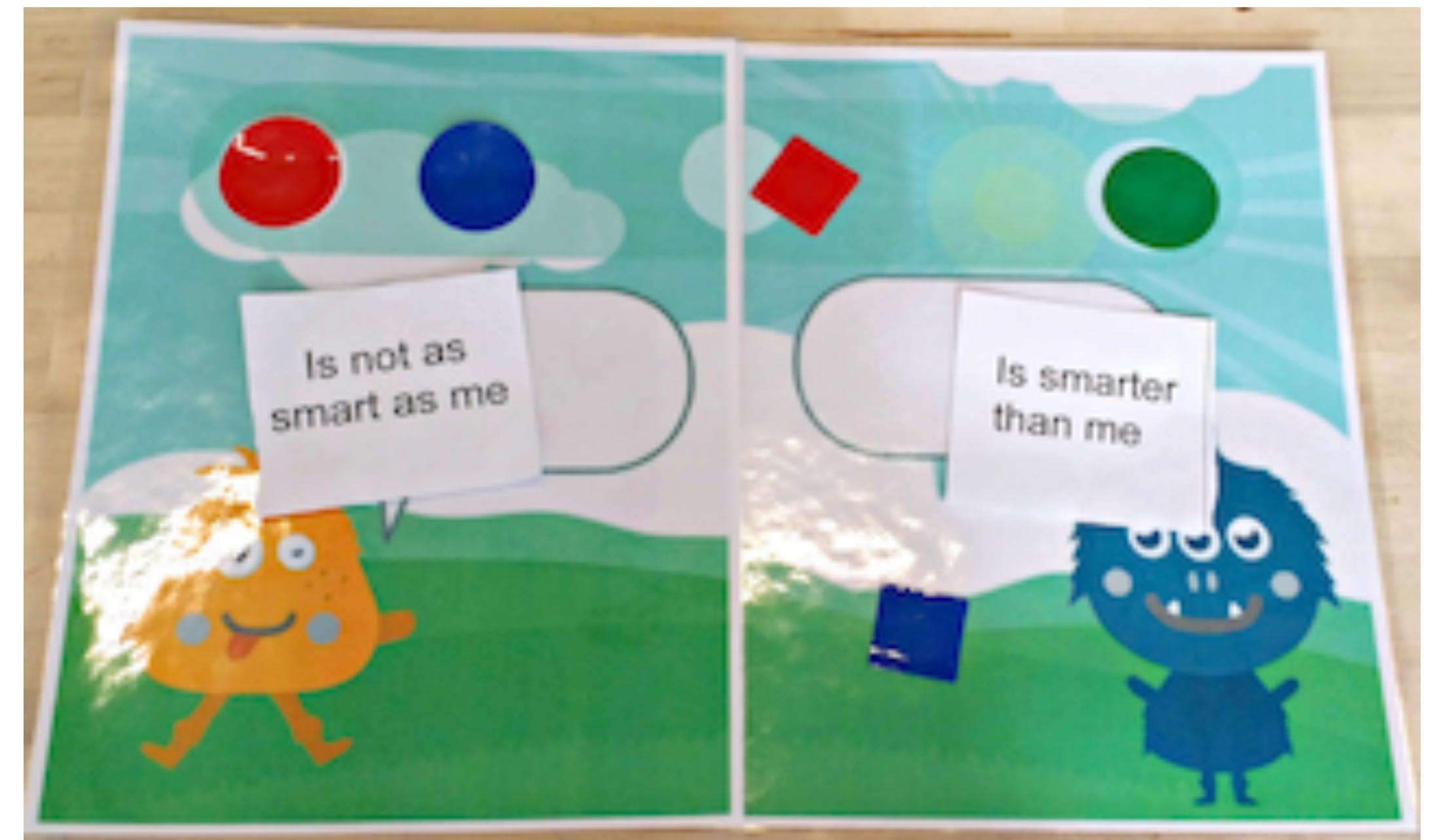
Pretend you are an **AI agent that wants to find all the dogs** in your neighborhood so you can pet them.

[Link to full document](#)

AI Ed effects on kids perception



Agents



Perception questionnaire

Adapted from Bartneck et. al

Longitudinal studies



Shady Hill Private School



ESCS Public school



EPH Public Center



Empower Private Center

Is it smarter than you? (pre/post)

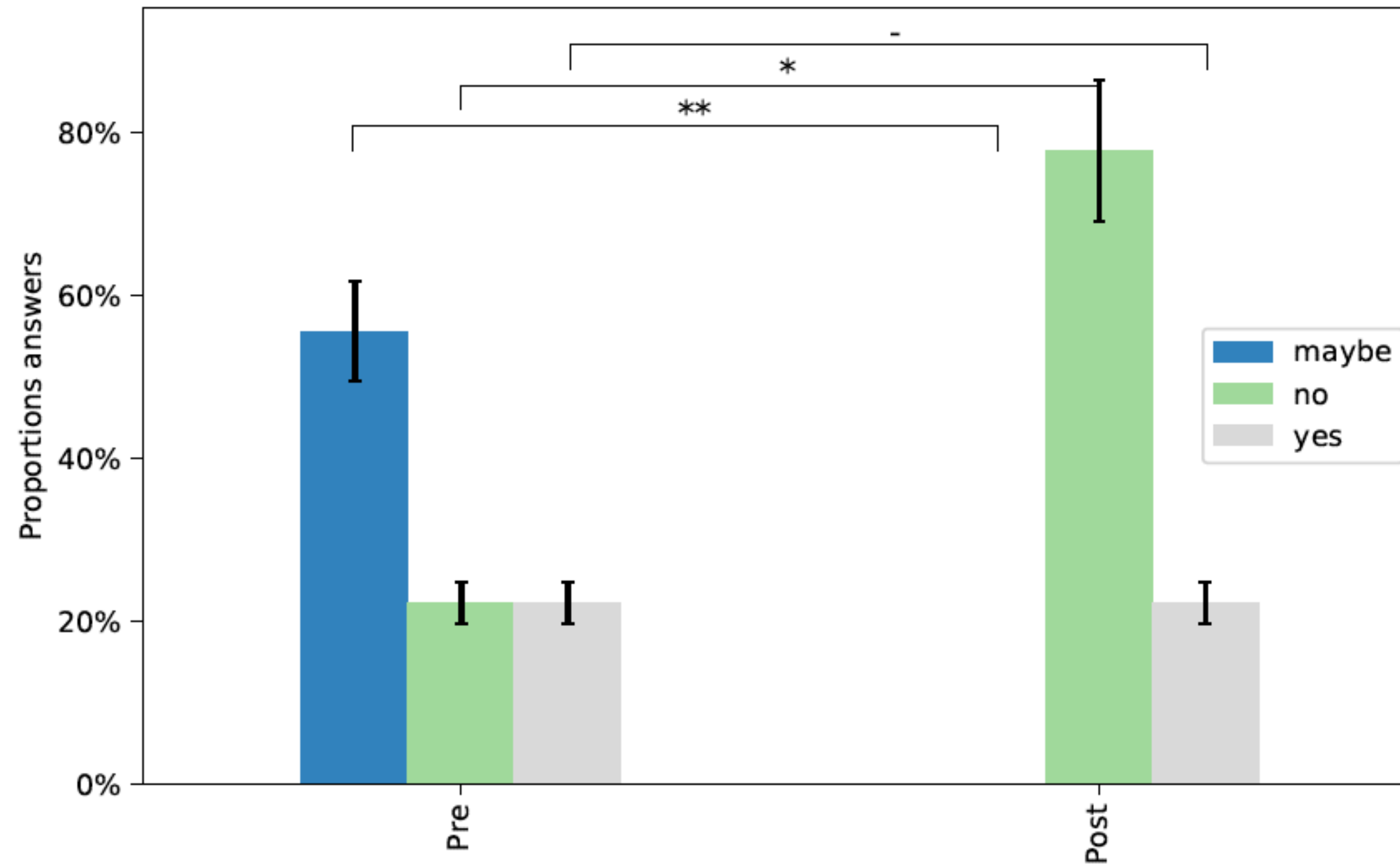
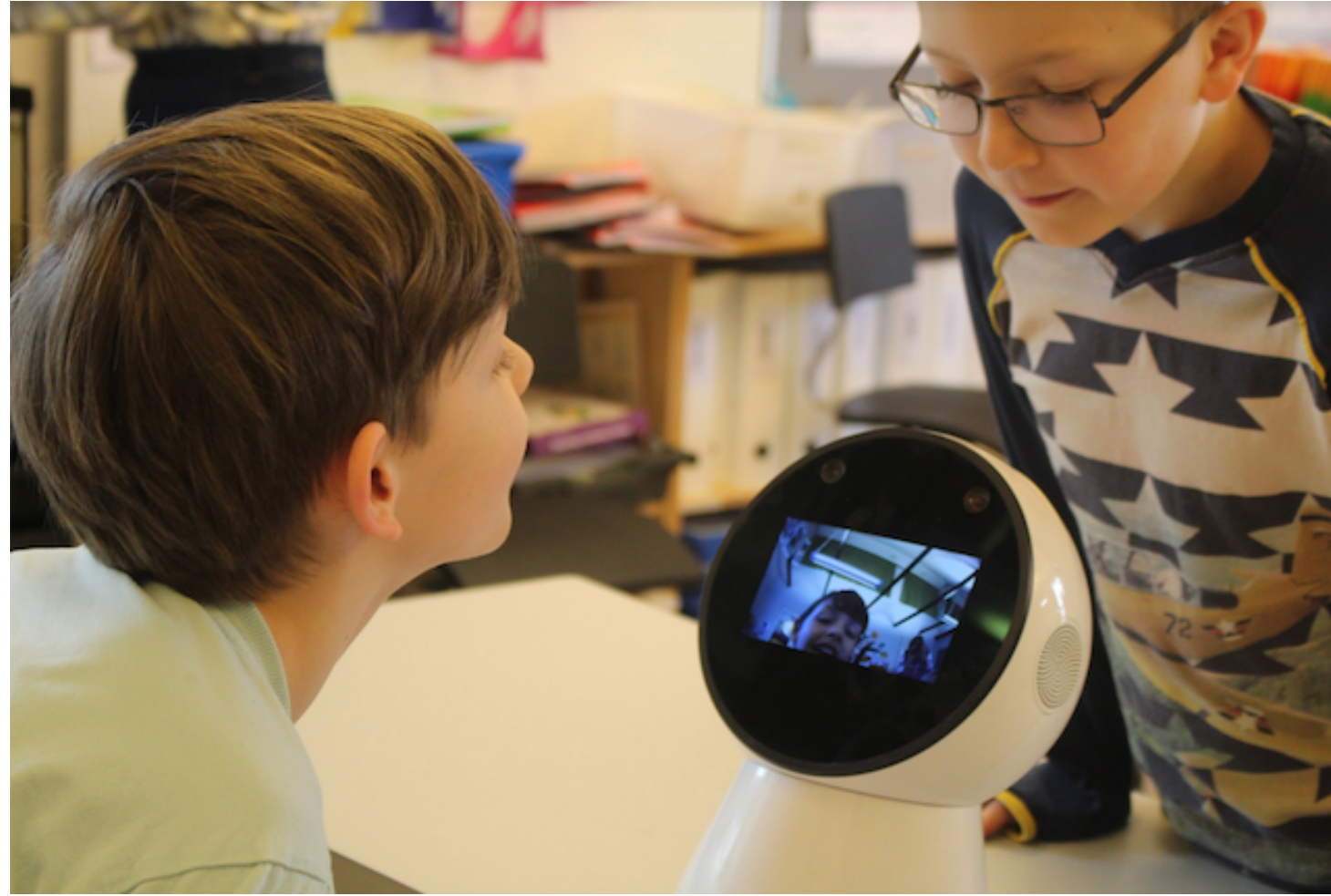


Figure 95: "Is the agent smarter than you?" answers Pre and Post at Empow Center, * $p < 0.05$, ** $p < 0.01$

International studies



Billund School Denmark



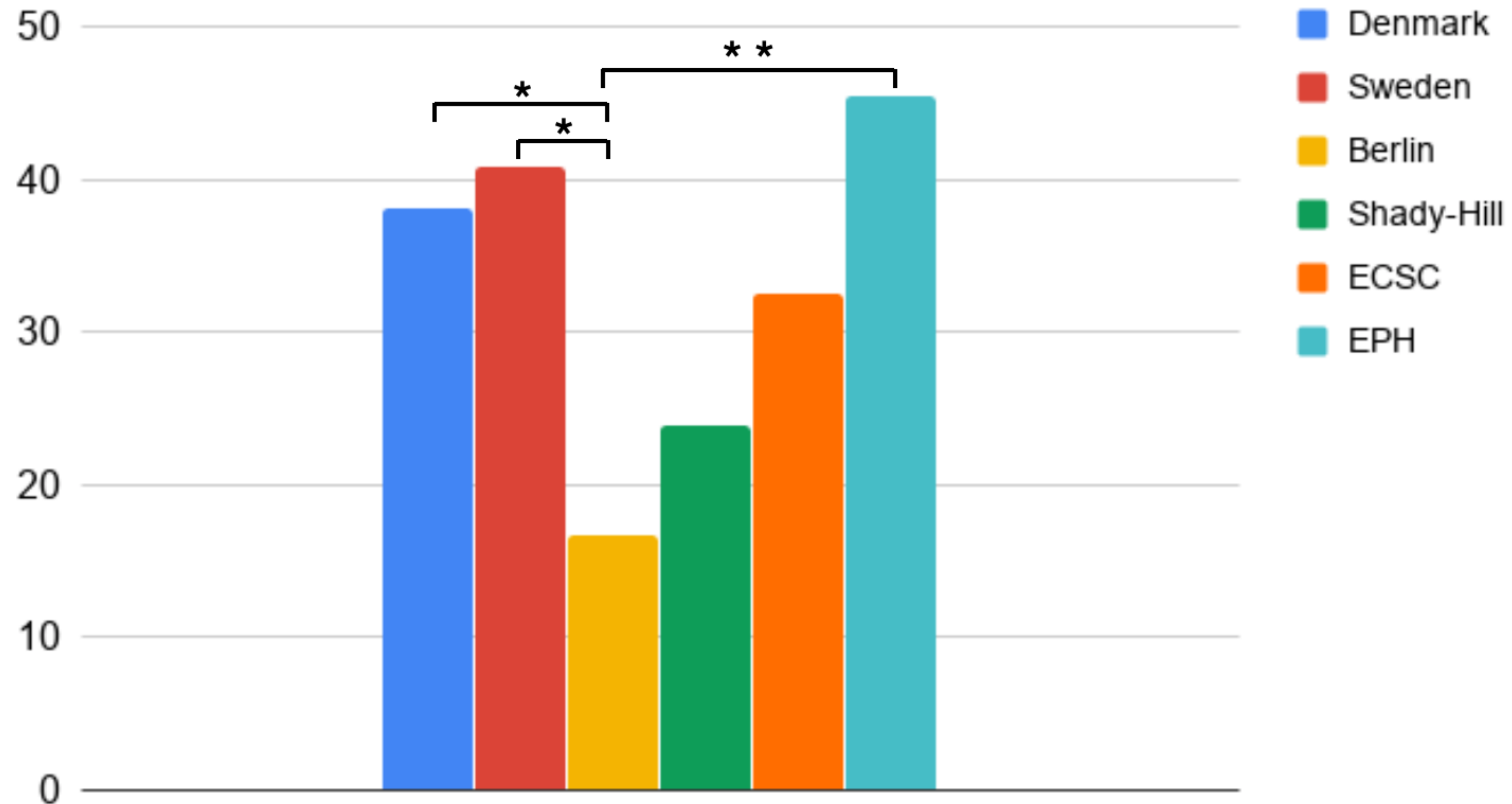
Redi School
Berlin



Skeleftea STEM Center Sweden

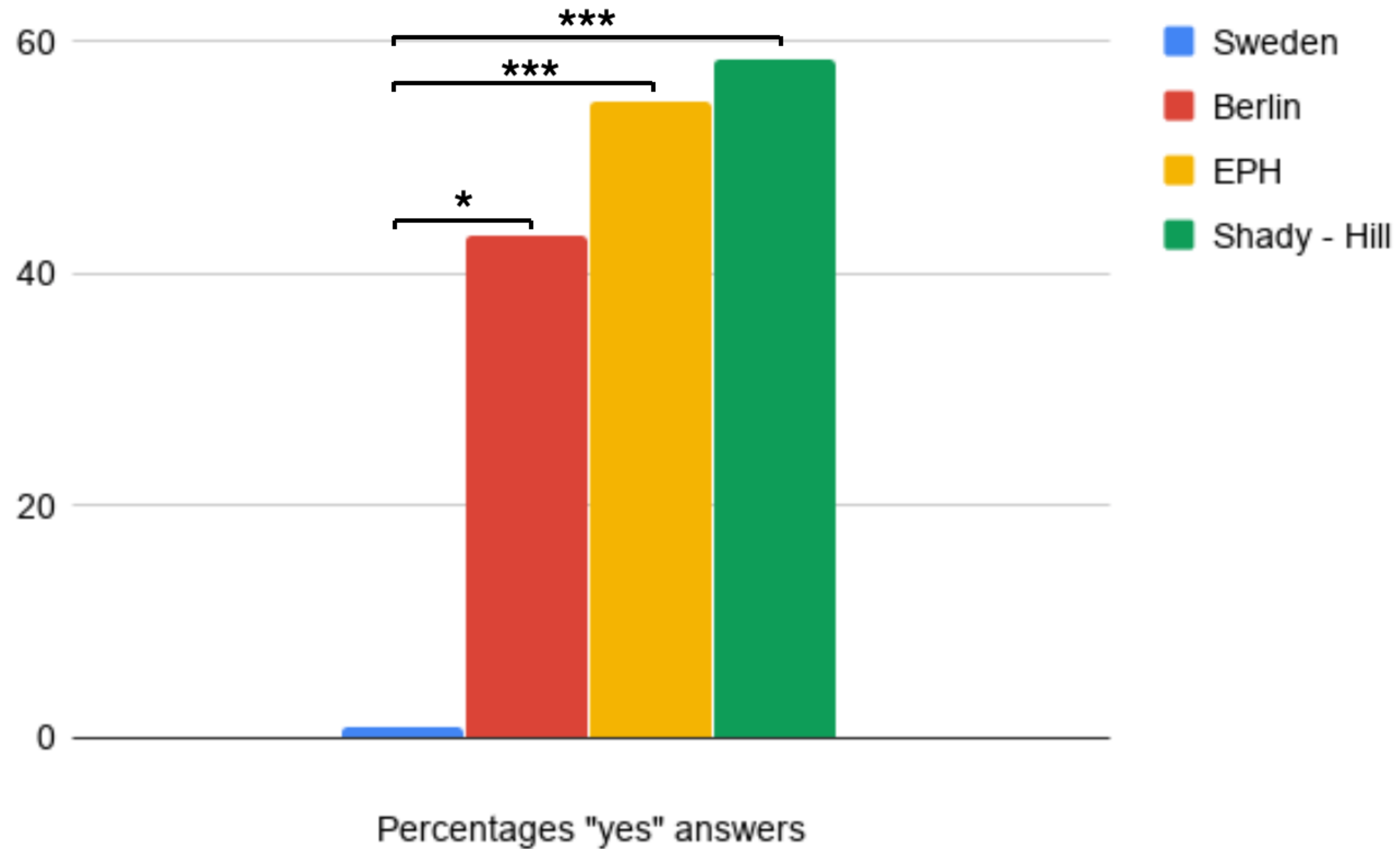


Is it smarter than you?



Percentages "yes" answers

Does it tell the truth?



Documentary on National TV in Germany

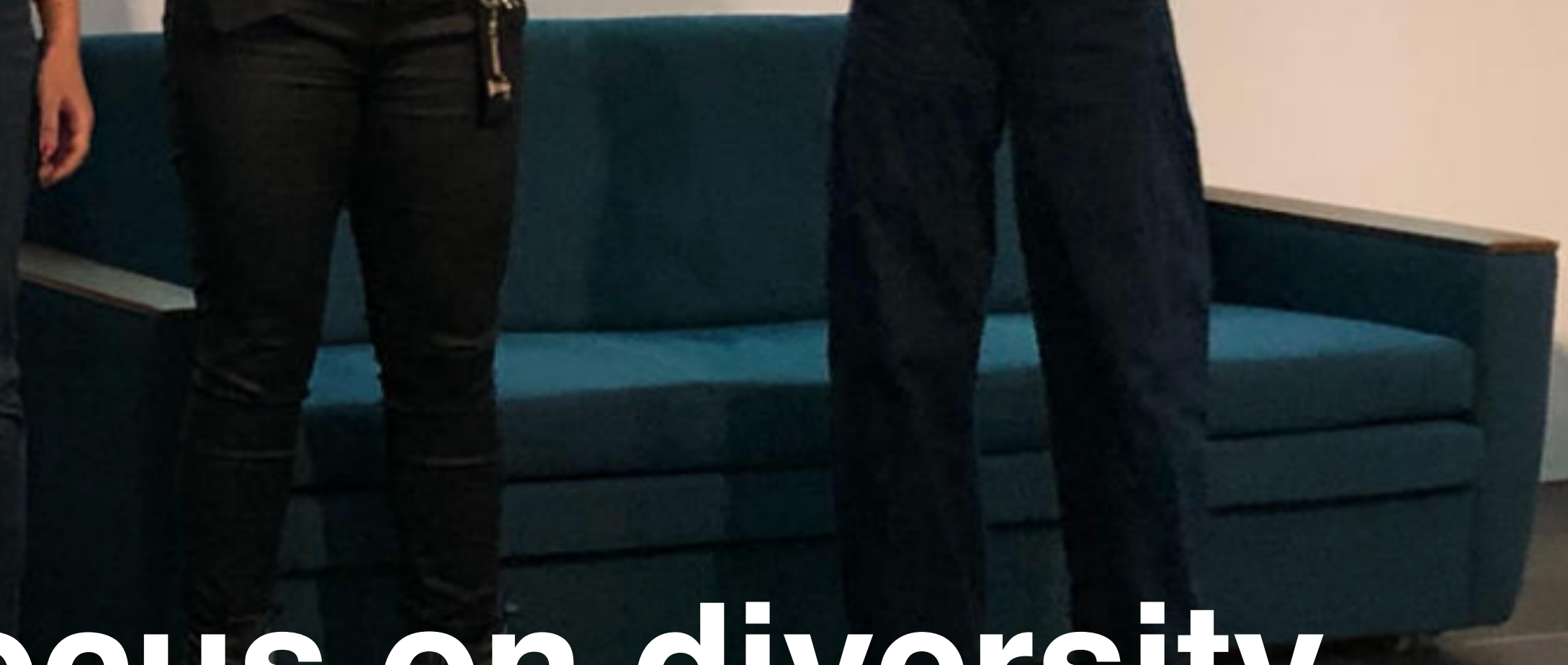




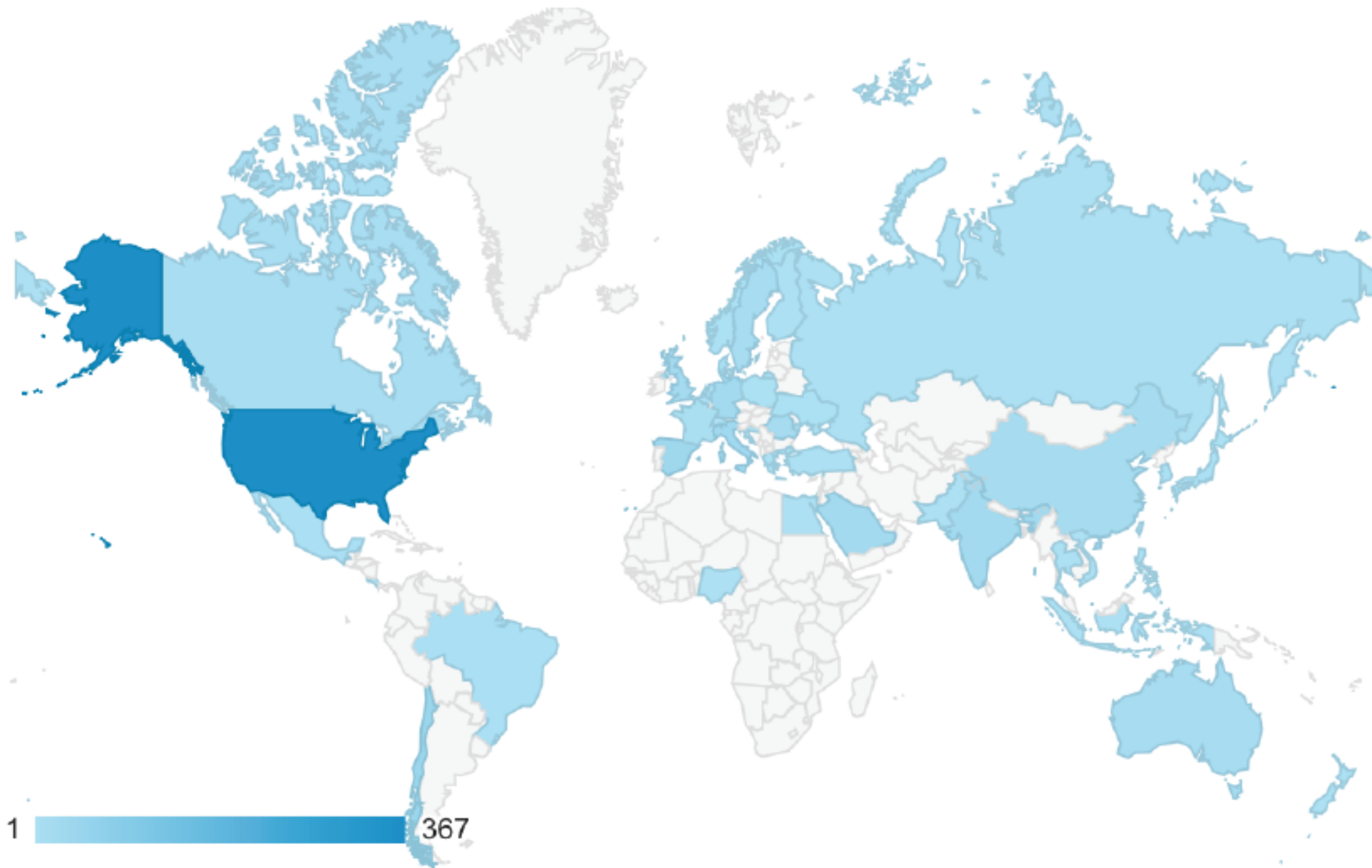
hub:raum
tech incubator of

Wie wird künstliche Intelligenz unsere Gesellschaft verändern?

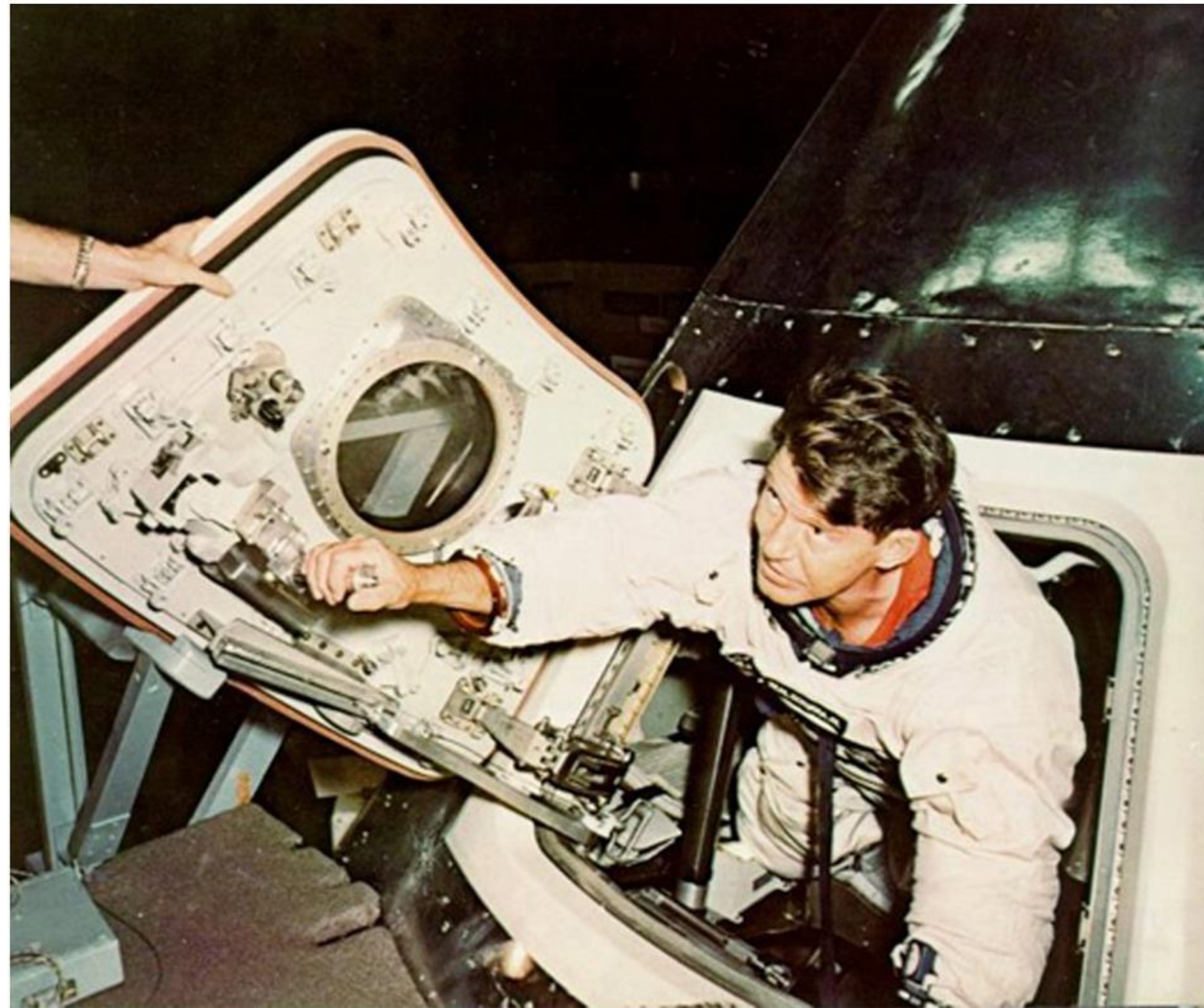
WEIZENBAUM-INSTITUT
FÜR DIE VERNETZTE GESELLSCHAFT
DAS DEUTSCHE INTERNET-INSTITUT



Focus on diversity



4000 unique users, 80+ countries, > 20min session
cognimates.me



PREPARE OUR KIDS FOR THE FUTURE



Thank you :)