



# our digital futures

*October 12, 2021*

Holly Cummins  
IBM

ada lovelace





lord byron



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# TMZ



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## Who's that with Lord Byron?!? Ooh dear, it's NOT Lady Byron!











lived in a mansion





lived in a mansion  
lots of silk gowns





lived in a mansion  
lots of silk gowns  
no laptop





lived in a mansion  
lots of silk gowns  
no laptop  
no phone





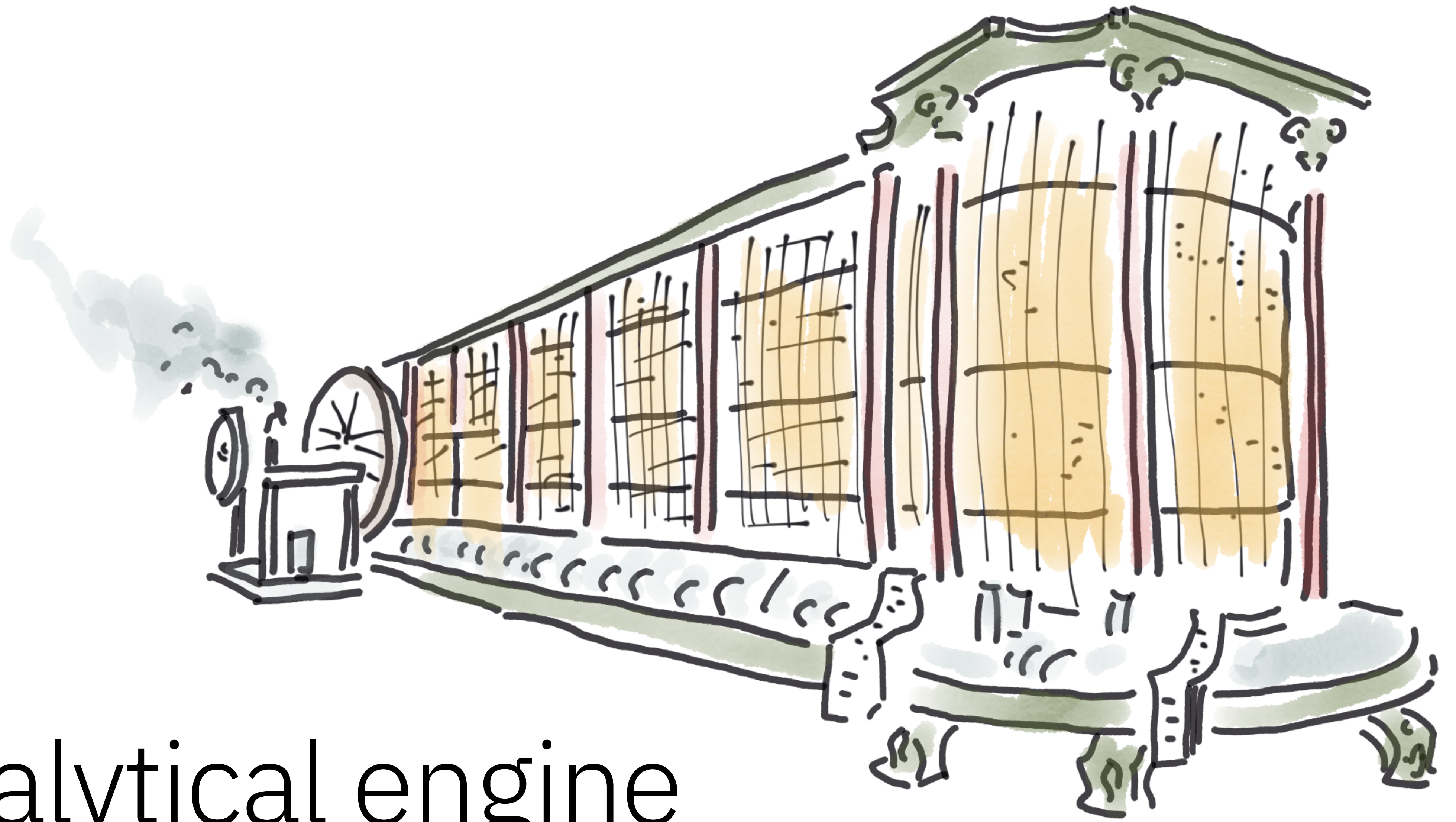
lived in a mansion  
lots of silk gowns  
no laptop  
no phone  
no ipad



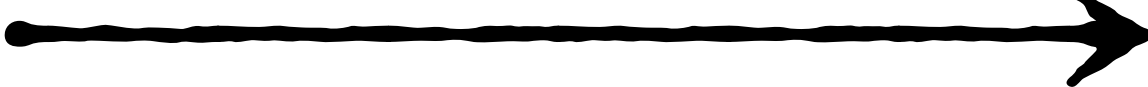


lived in a mansion  
lots of silk gowns  
no laptop  
no phone  
no ipad  
questionable indoor plumbing

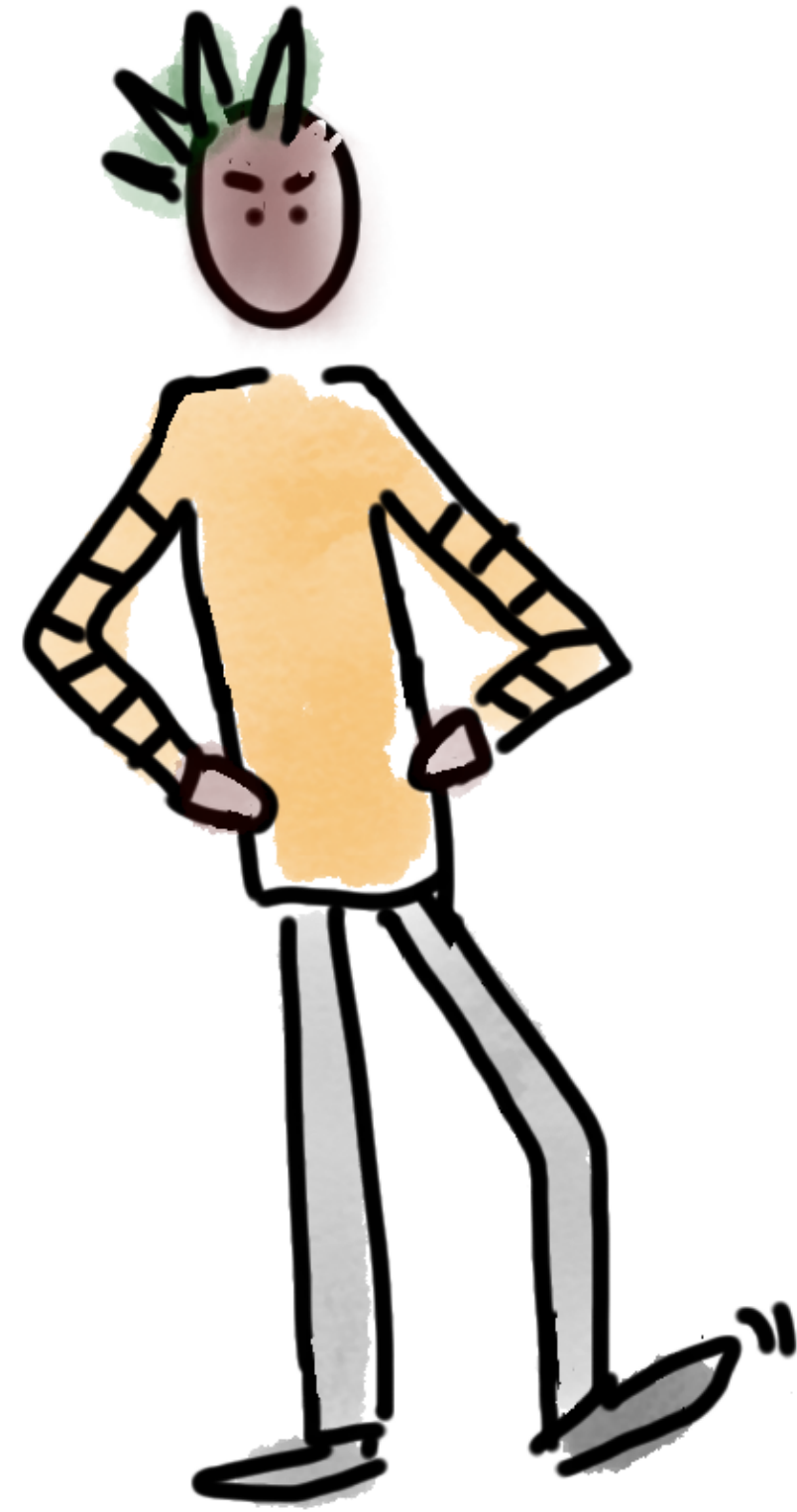




the analytical engine

1,756,833  3,523,749

calculation



representation

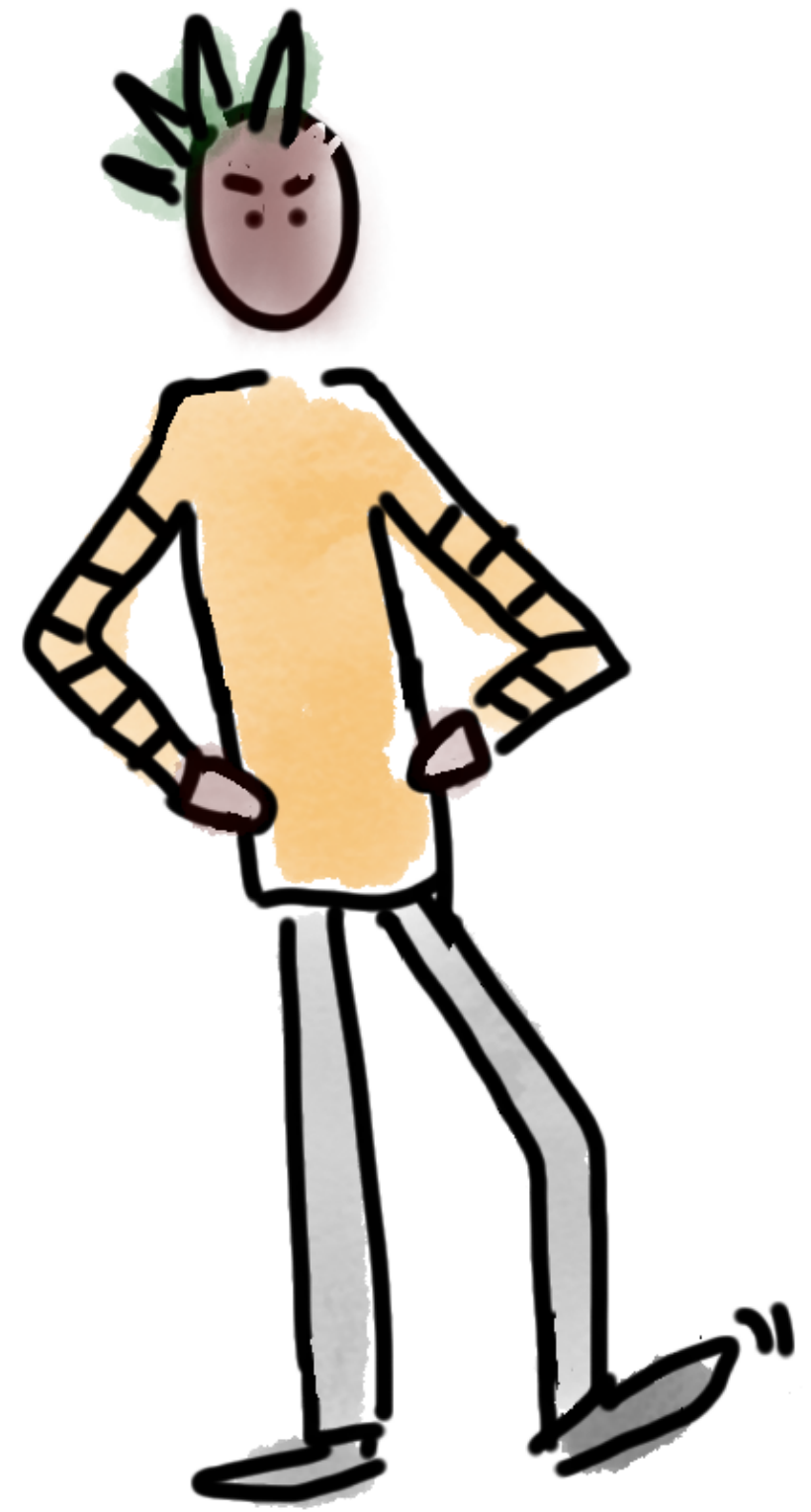
1756833

representation

3523749

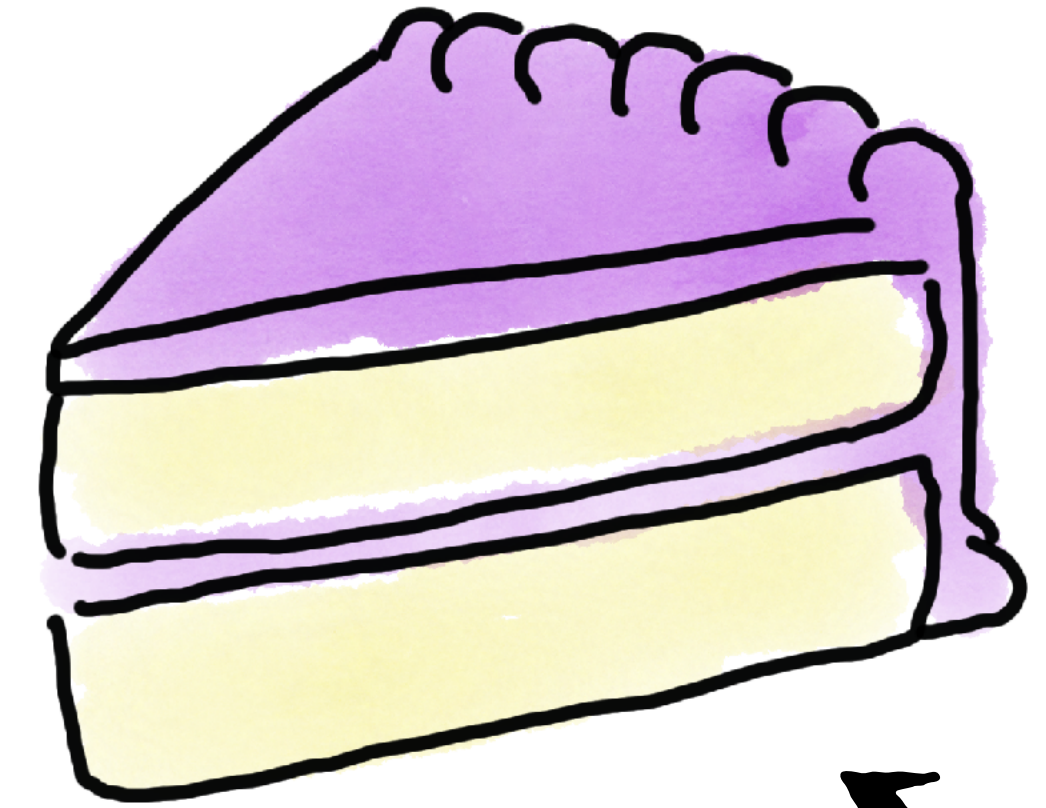
calculation





representation

1756833



representation

3523749

calculation

me



“phone”





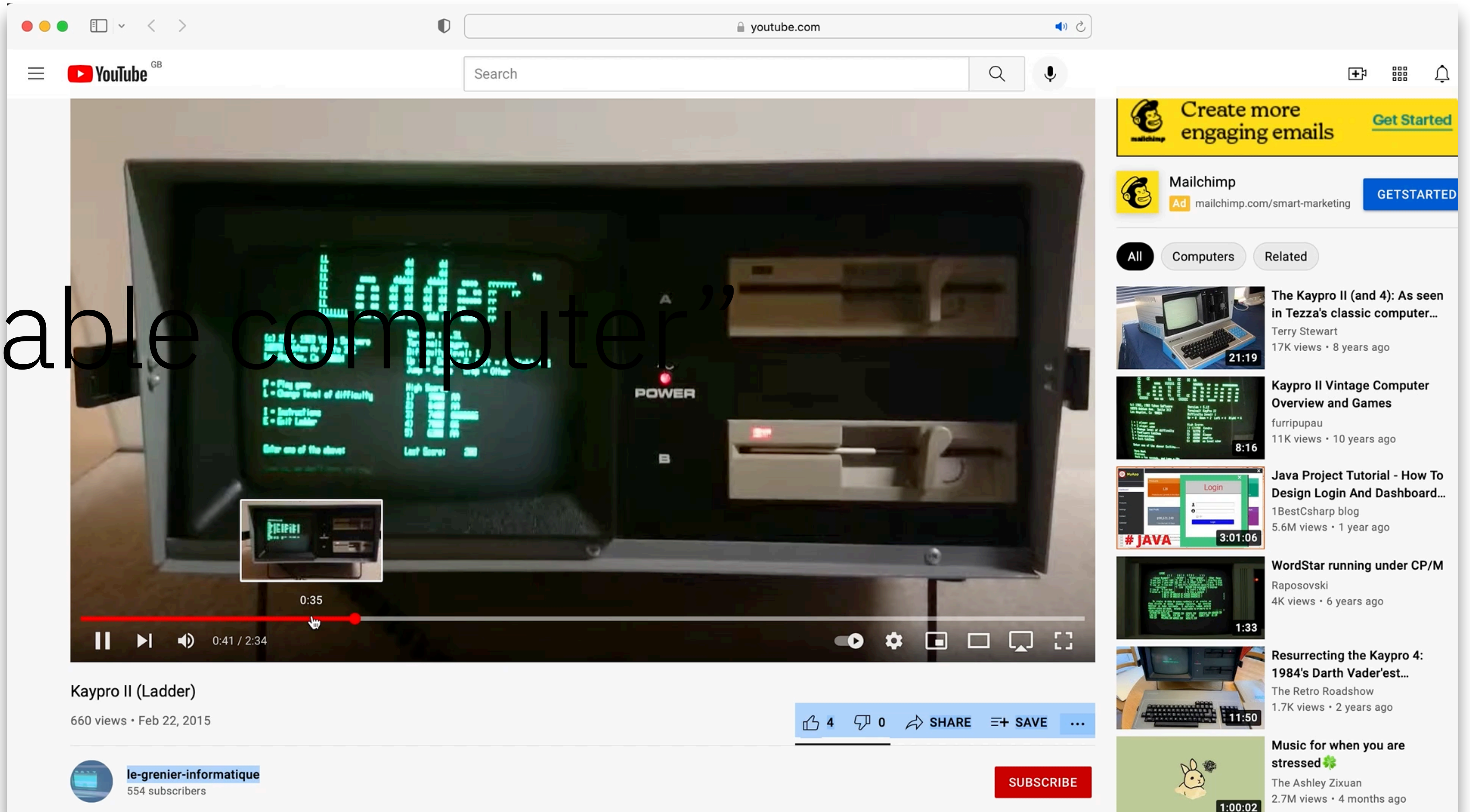
“tv”







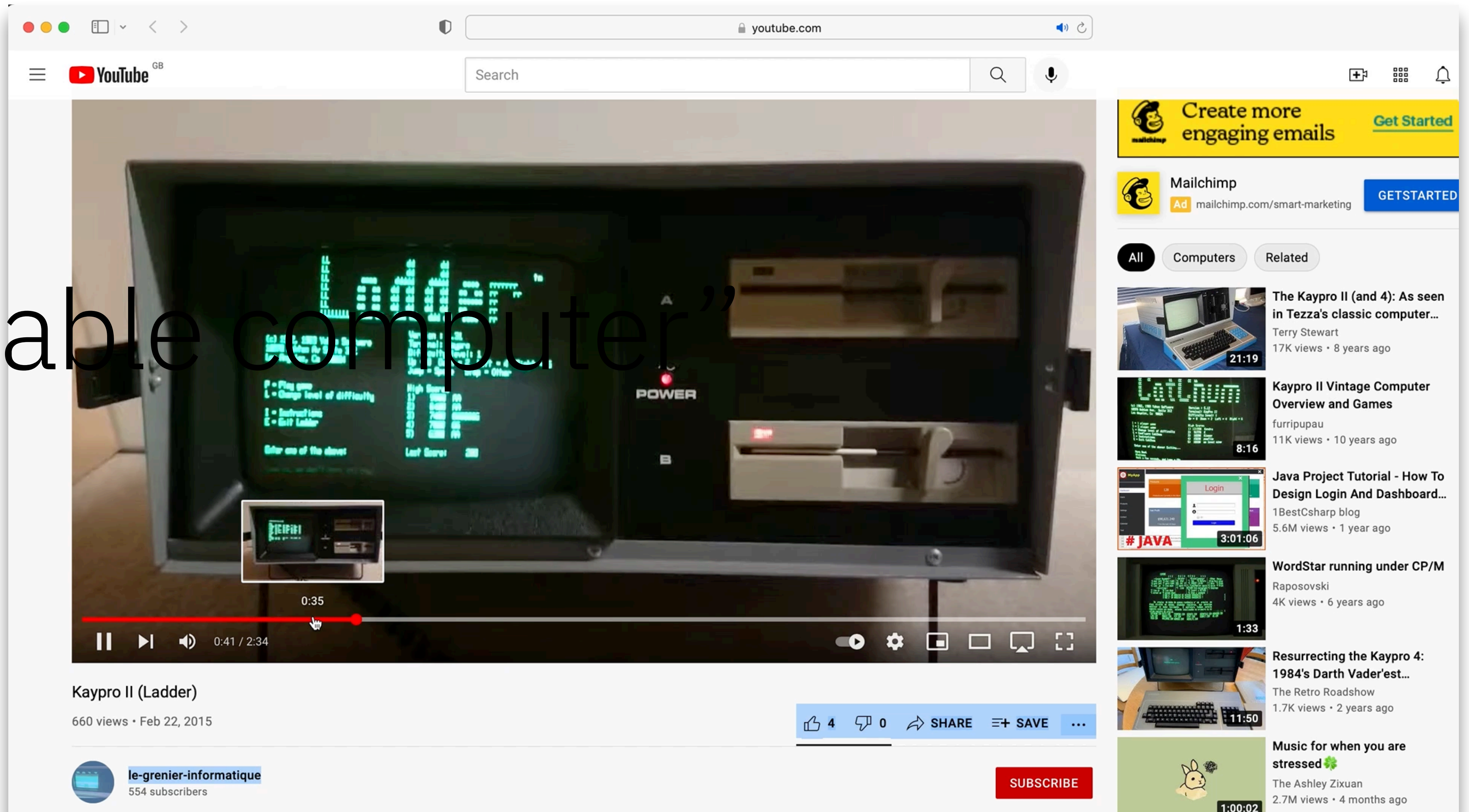
“portable computer”







“portable computer”





my second  
computer







no internet



no internet  
no google



no internet

no google

no email

no internet

no google

no email

no social media



me?



Not Secure — news.bbc.co.uk

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Monday, June 21, 1999 Published at 17:33 GMT 18:33 UK


## Education

# Call to double UK science funding



World-class: Oxford's nuclear magnetic resonance facility

The UK must double its spending on science by 2008 and end "disgracefully" low pay in universities if it is to retain a world-class science and engineering base, a leading science campaigner says.



Dr John Mulvey made the comments as he accepted an honorary degree from University College London in recognition of his work as one of the founders and later Director of the campaign group Save British Science.

Dr Mulvey - now retired - said that scientific research involved a long-term investment in people and their ideas.

If British science were to remain on a par with the best in the world in deserved world-class levels of public funding.

His remarks echo comments by the head of the Wellcome medical research charity, which last week announced pay rises of up to 30% for its UK

Education Contents

Features

Hot Topics

UK Systems

League Tables

Relevant Stories

17 Jun 99 | Education

University admissions face disruption

25 May 99 | Education

Lecturers strike over pay

21 May 99 | Education

Pay blow for university staff

23 Feb 99 | Education

Universities seek more women in science

05 Feb 99 | Education

Close the pay gap, say lecturers

Internet Links

Higher Education Funding Council for Wales

The Save British Science Society

Particle Physics and Astronomy Research Council

Office of Science and Technology

European Science Foundation

Higher Education Funding Council for England

Scottish Higher Education Funding Council

The BBC is not responsible for the content of external internet



my job at IBM

how can we help the elderly  
to live independently?

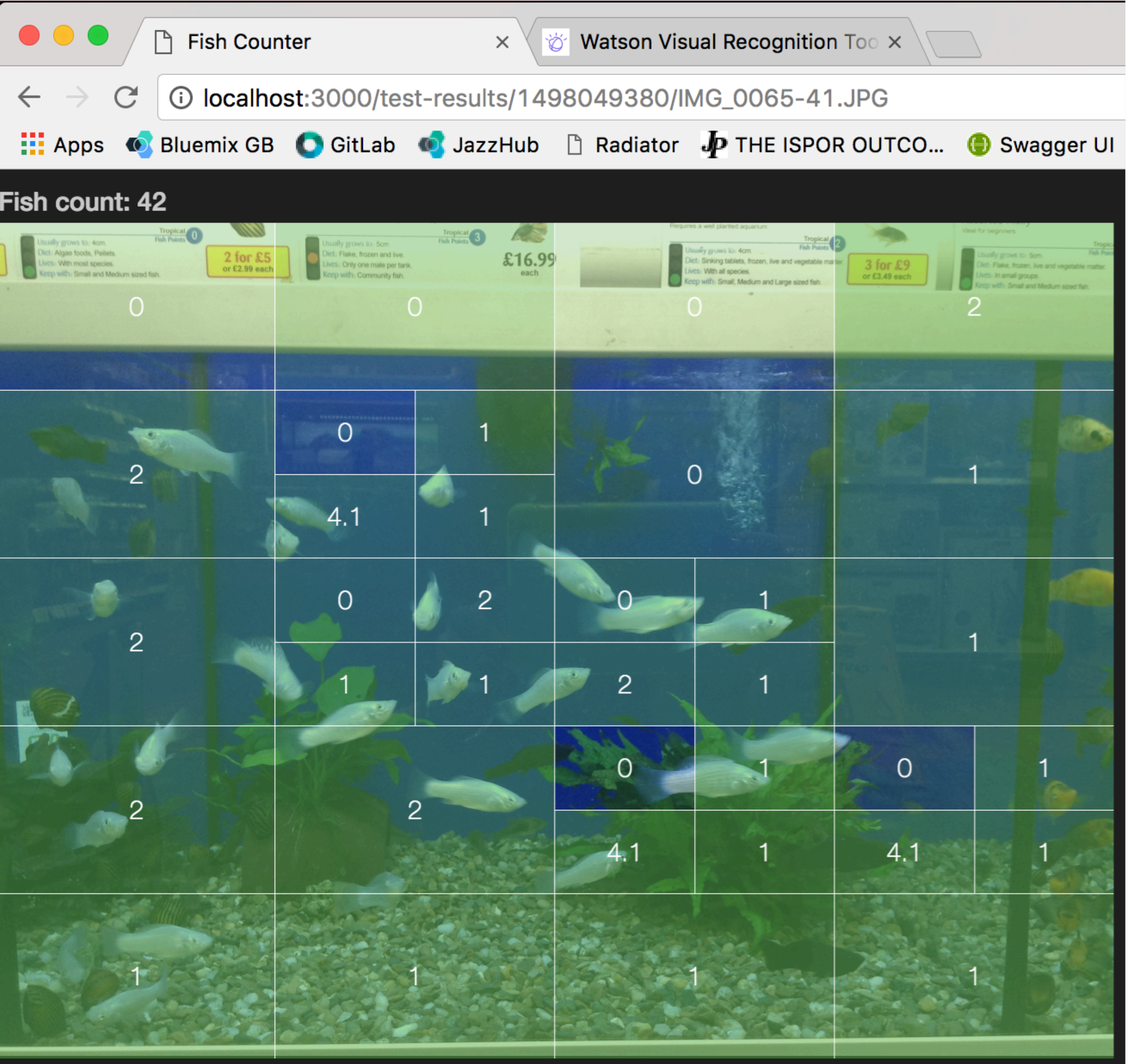






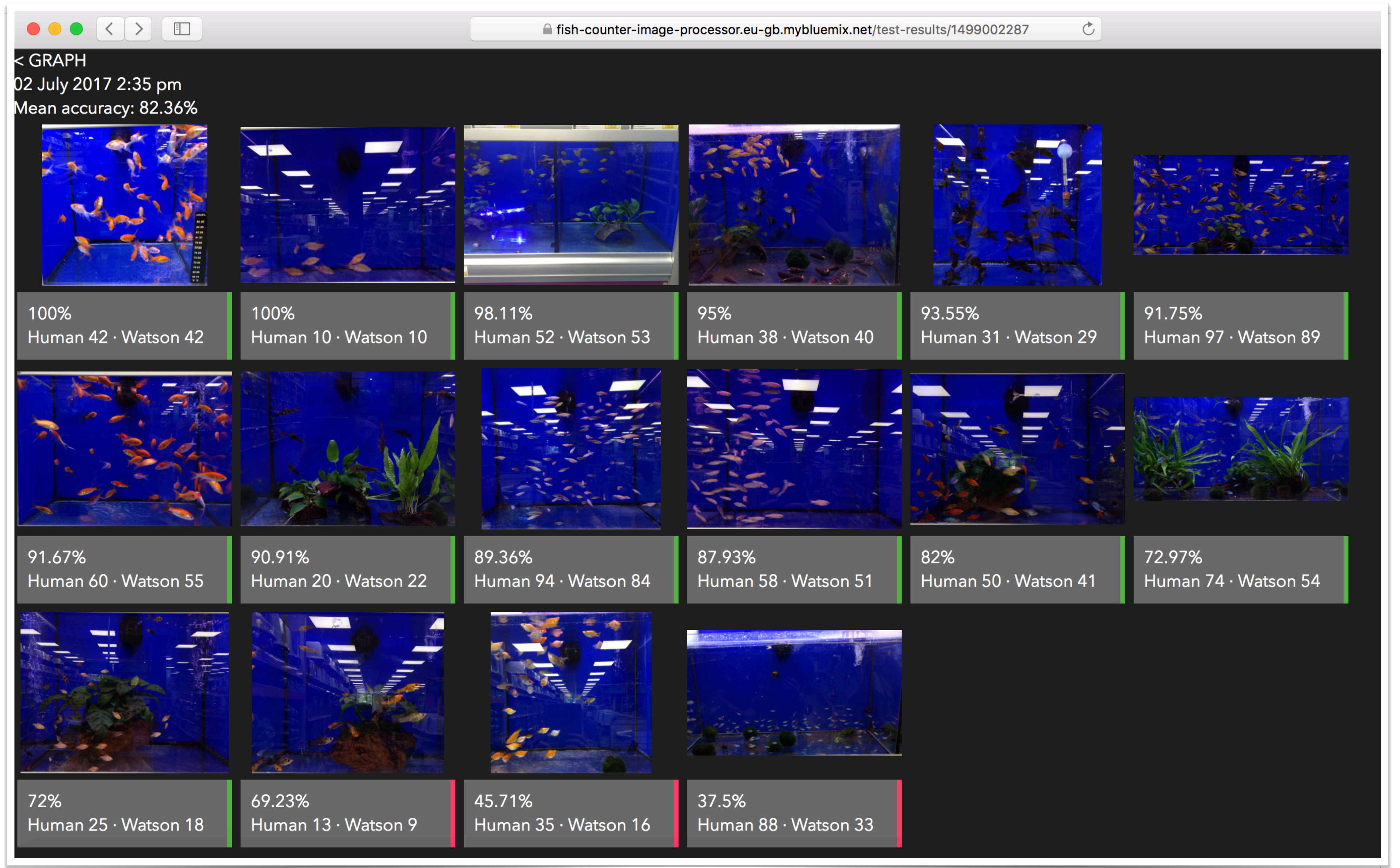
taught a computer to count fish







Mean accuracy  
for this test was  
**82.36%.**





www.cnbc.com/2016/05/03/this-blind-man-is-running-a-155-mile-ultra-marathon-with-the-help-of-an-ibm-app

CNBC

PRO

WATCHLIST

1.6K  
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COMMENTS

Start the Discussion

Arjun Kharpal | @ArjunKharpal

Tuesday, 3 May 2016 | 8:27 AM ET

CNBC

ASICS Europe

SIMON  
WHEATCROFT  
IS LEGALLY BLIND

CNBC

Simon Wheatcroft is completely blind. But that's not going to stop him running a 250 kilometer (155.3 mile) race in the desert.

spg.  
Starwood  
Preferred  
Guest

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Step up to a suite or villa and  
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FROM THE WEB

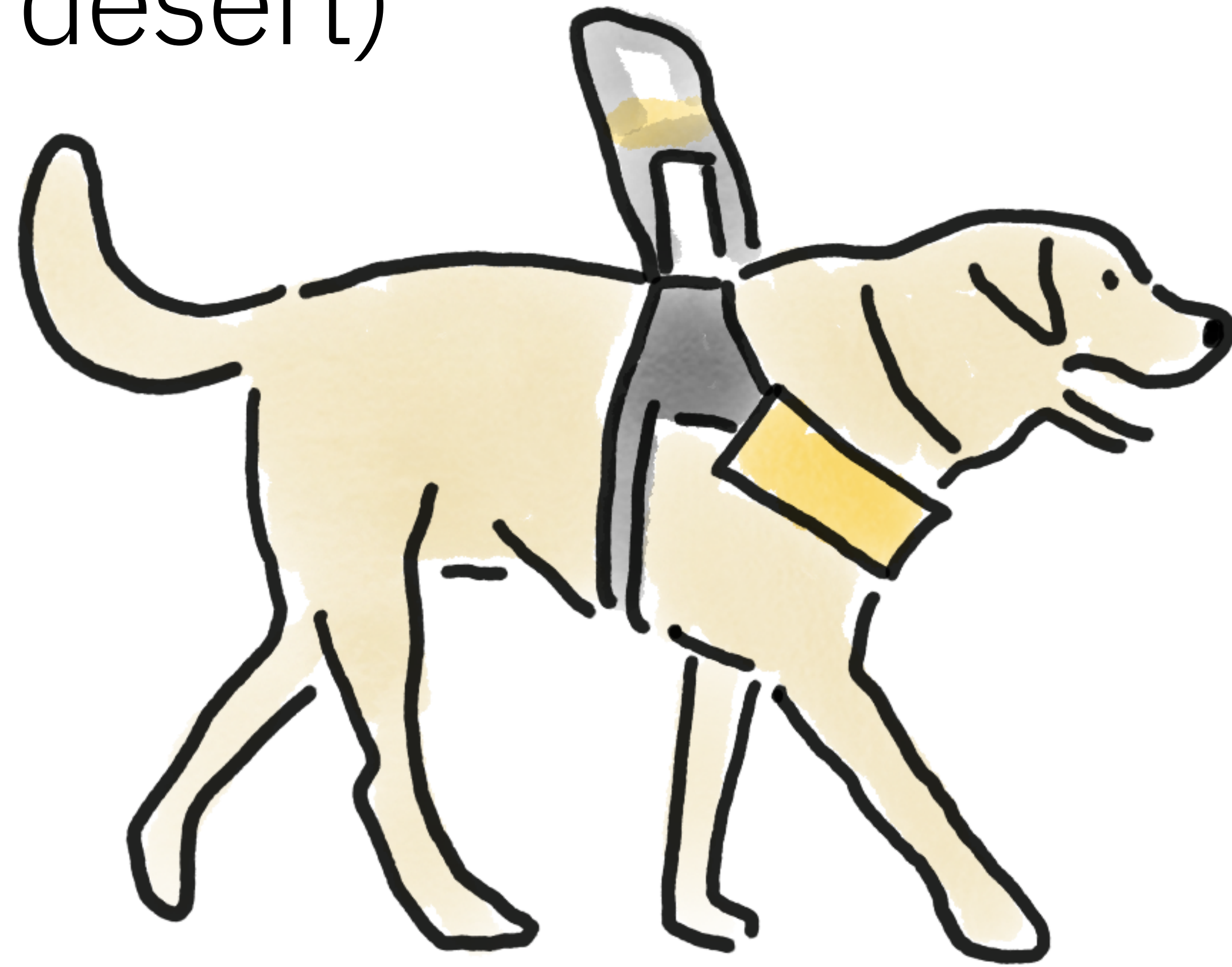
Sponsored Links by Taboola







guide dogs can't run ultra-marathons  
(especially not in the desert)





## Simon Wheatcroft runs blind with help of a phone app

18 May 2016 Last updated at 00:00 BST

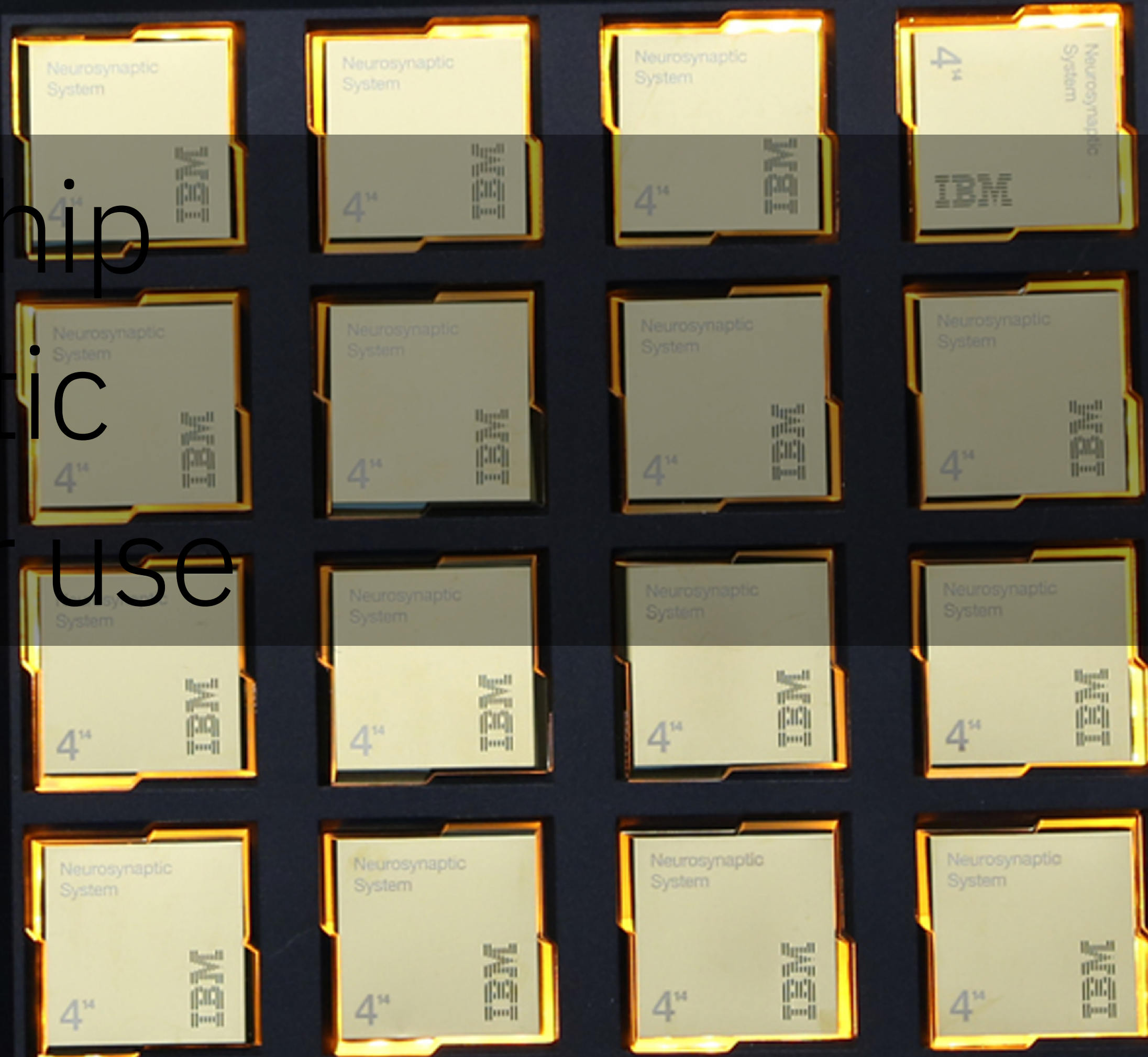


the future of technology



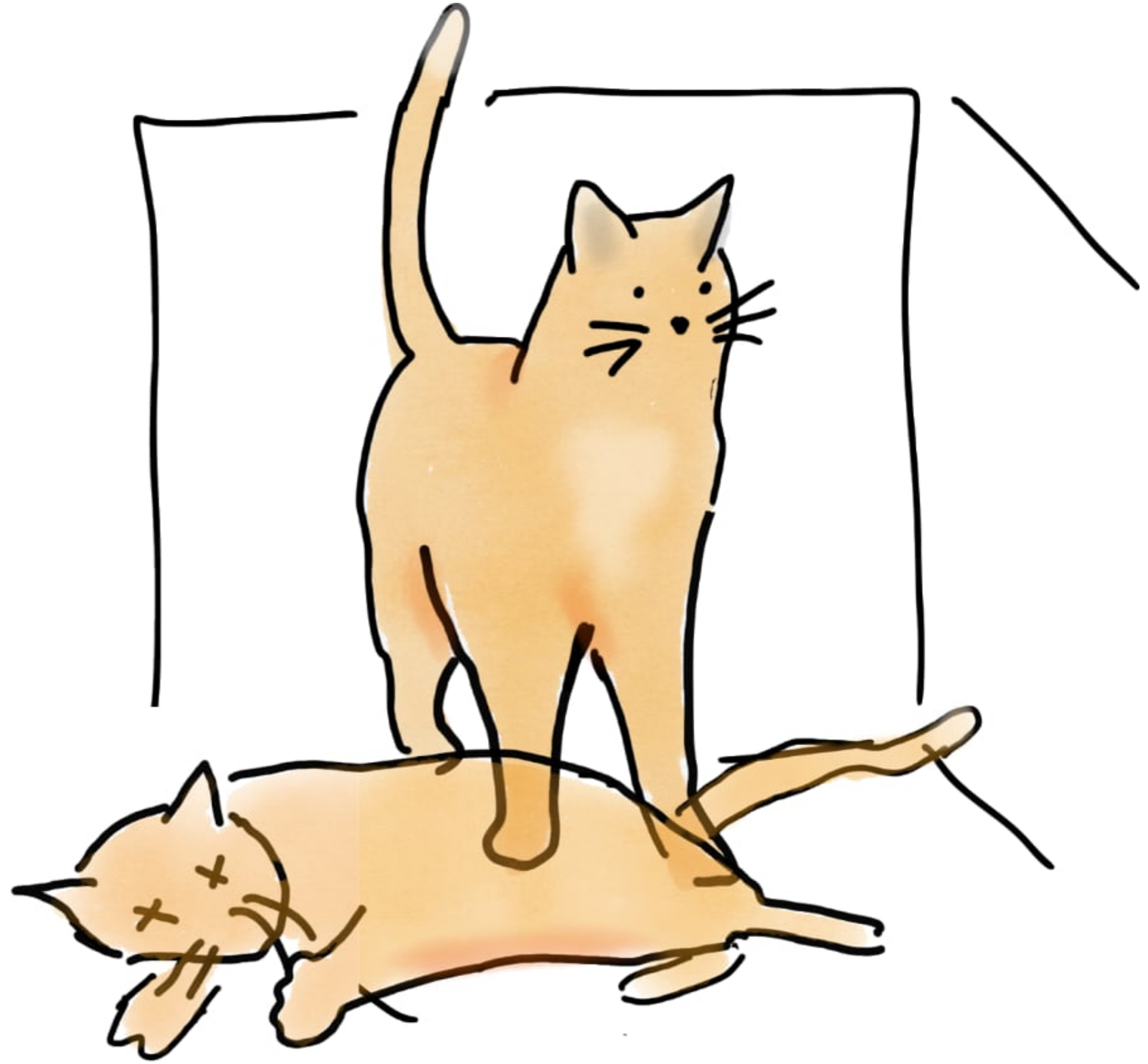
IBM Research

TrueNorth chip  
neuromorphic  
lower power use





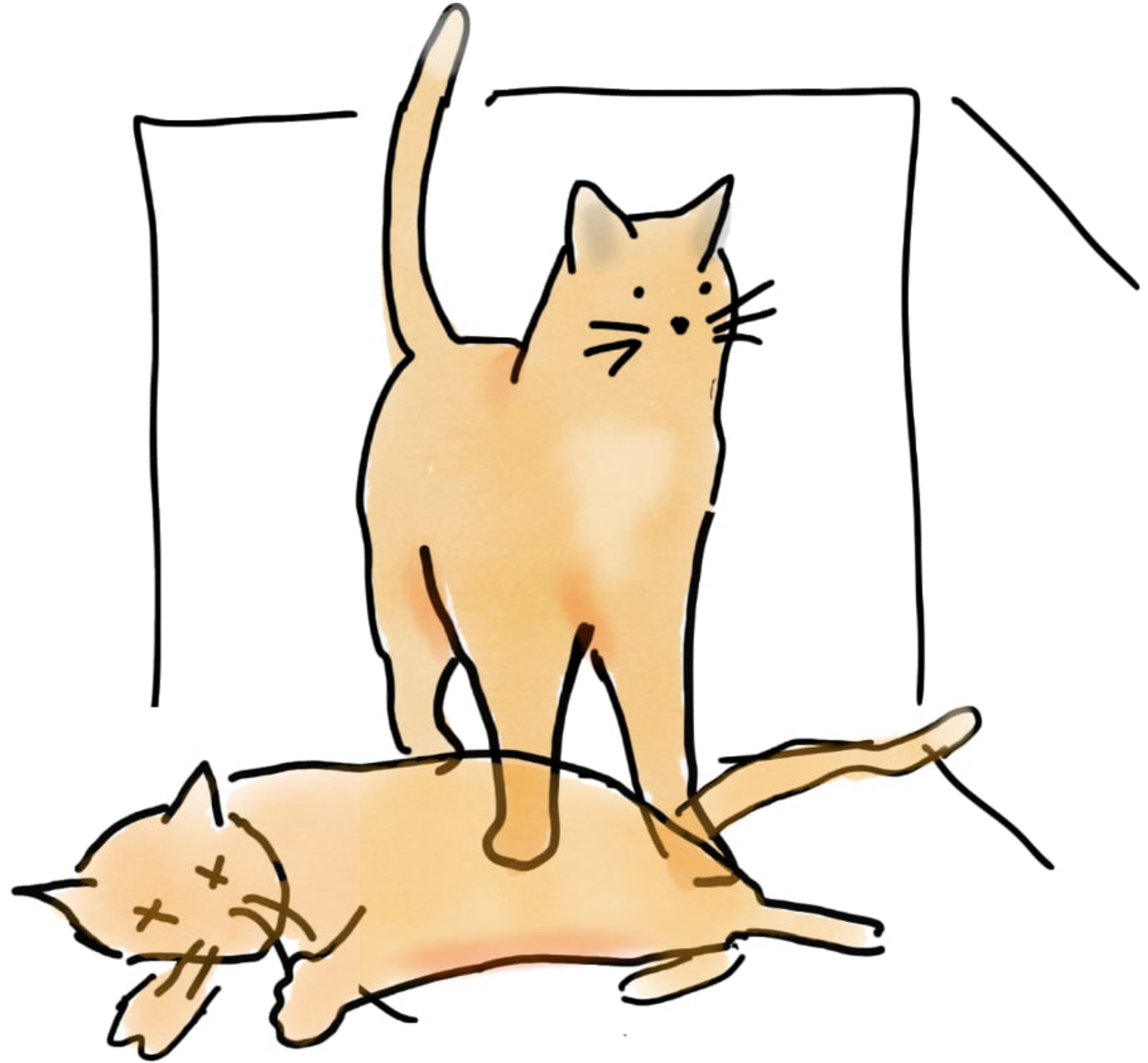
quantum  
computing



# quantum computing

qubit

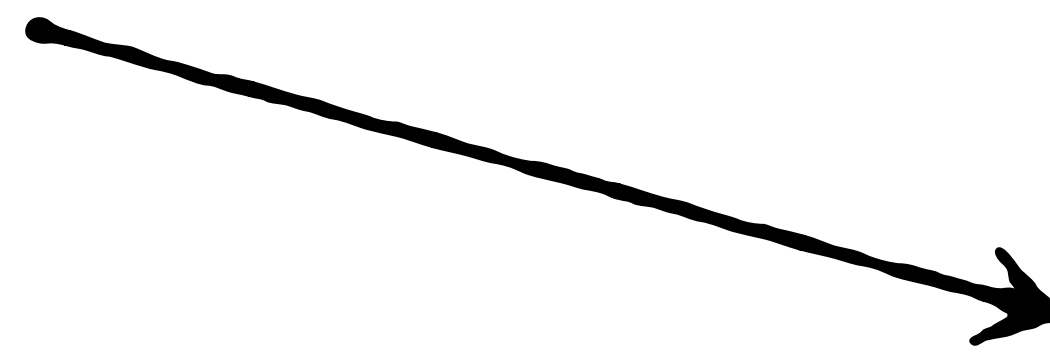
both 0 and 1





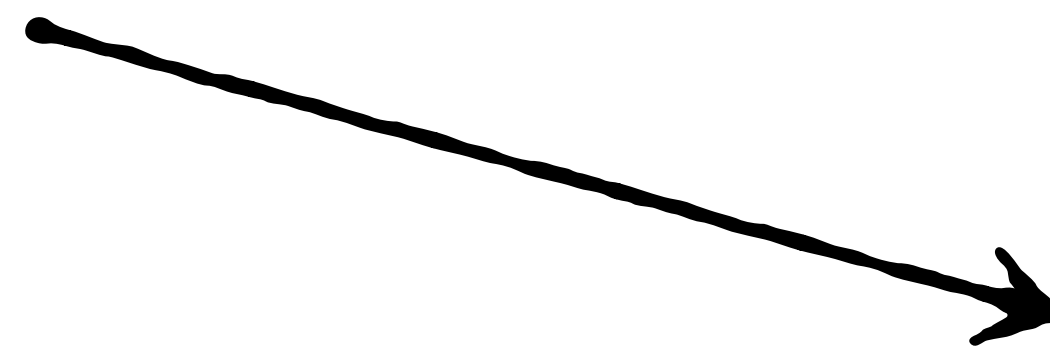


fridge  
colder than the space  
between the stars





fridge  
colder than the space  
between the stars



actual quantum chip



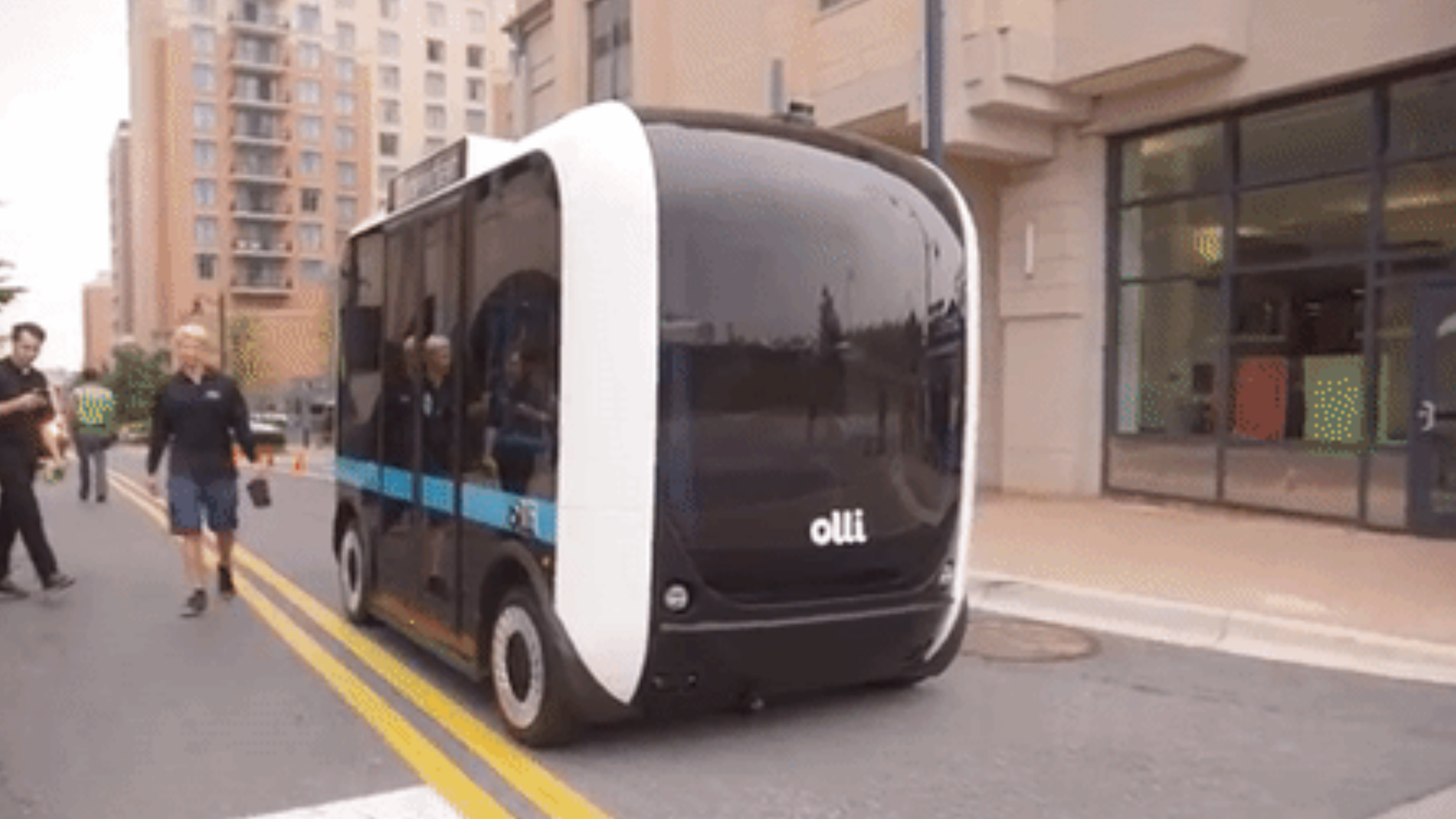


IBM Q

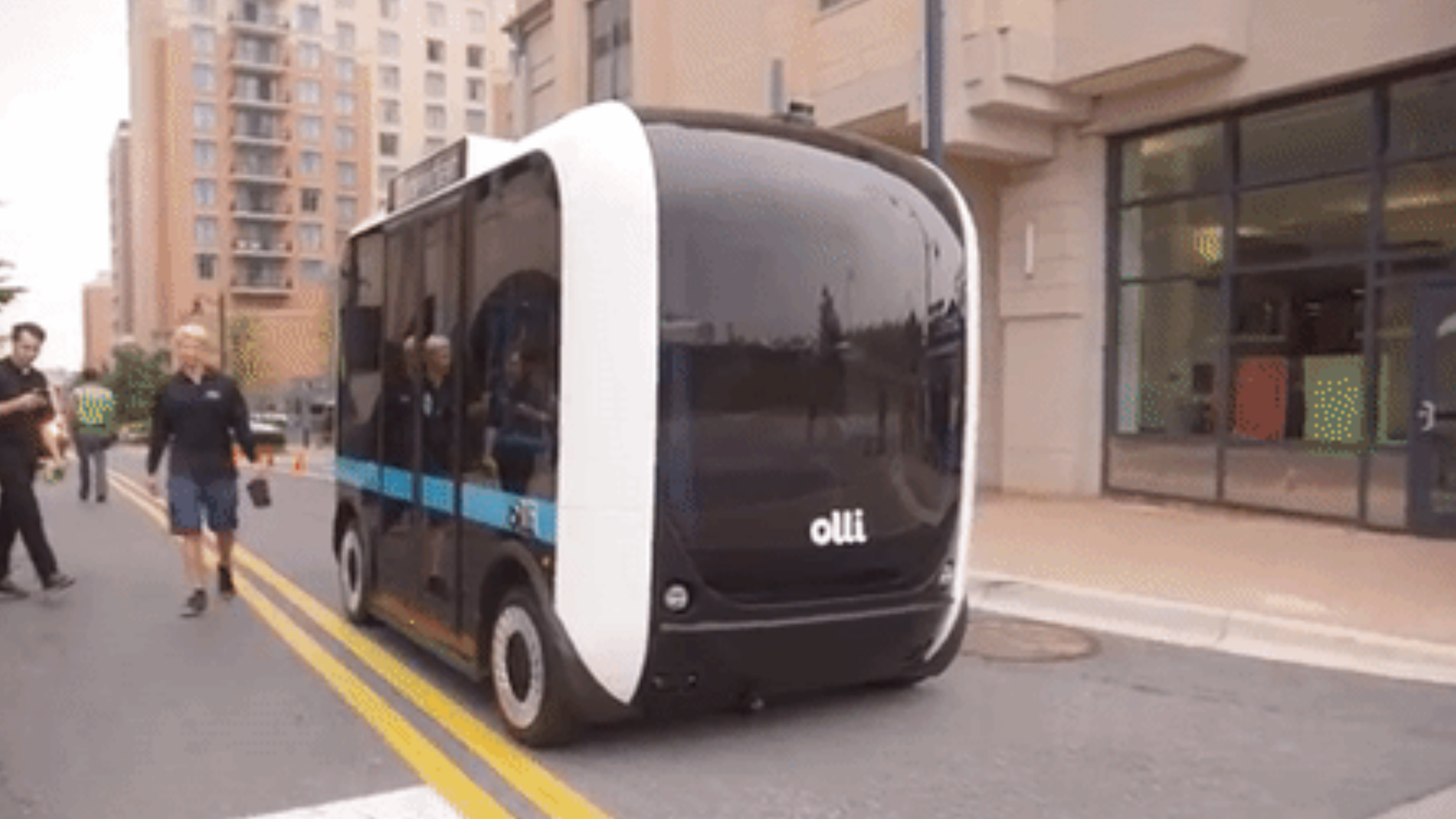
$$\frac{1}{\tau} \int_0^{\tau} dt, \mathcal{H}(t,)$$













ibm.com

Automation

Strategy and vision

Approach

Technology


# Pushing the limits of autonomous navigation with AI and automation

Groundbreaking technology from a new, fully self-operating ship inspires the next generation of innovation for your business

Overview

## A Mayflower to advance the promise of AI and automation

The culmination of a multi-year project with IBM and marine research non-profit ProMare



Let's talk

Watch the ship's multi-part





















*think of what's possible if devices don't need to  
connect to the cloud to do heavy lifting*



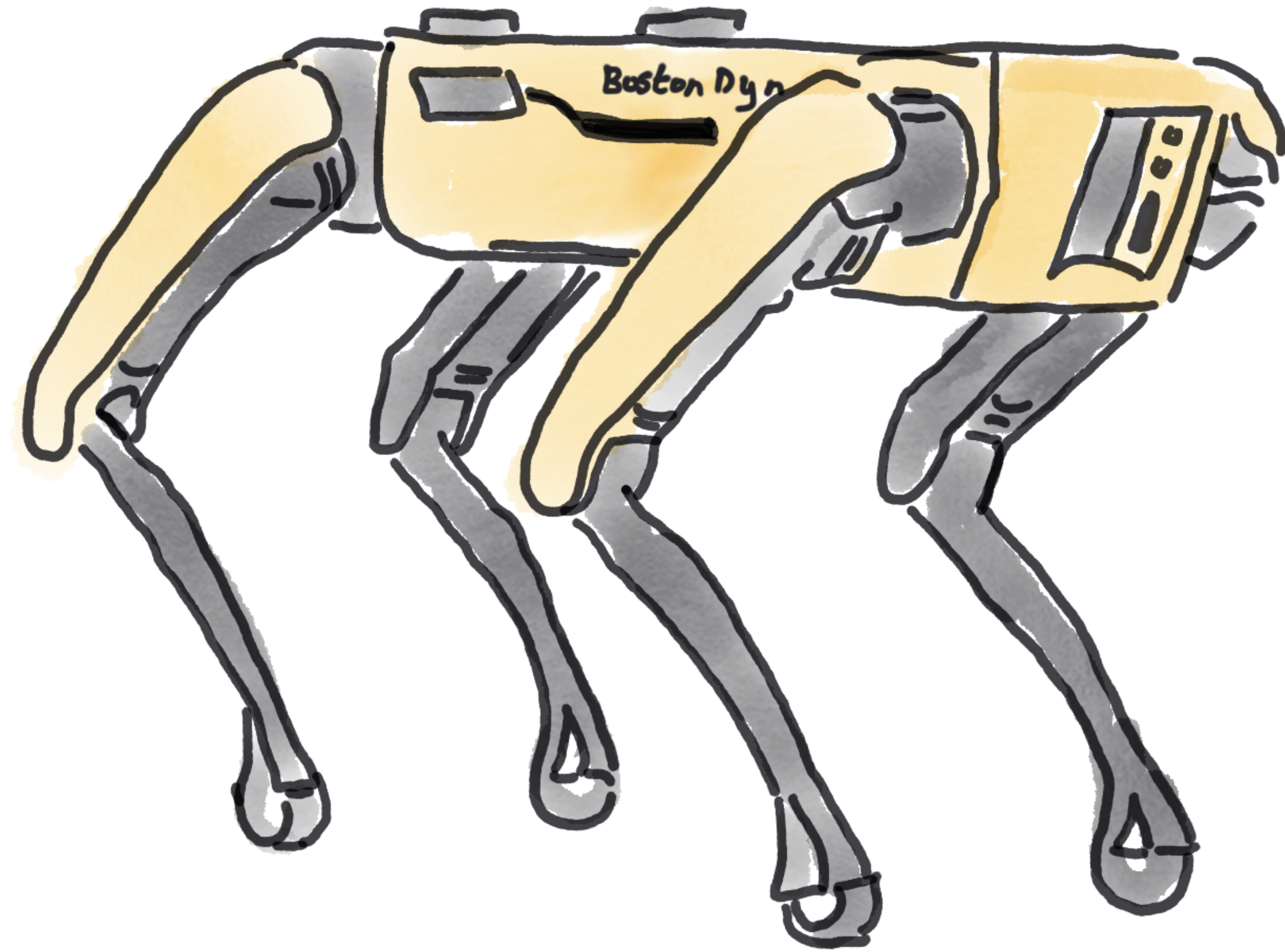
# edge

*think of what's possible if devices don't need to  
connect to the cloud to do heavy lifting*





“spot the dog”







# Boston Dynamics + IBM

Smarter operations through advanced technologies

(ambient music)





# Boston Dynamics + IBM

Smarter operations through advanced technologies

(ambient music)





(upbeat music)

Edge-based analytics drive smarter operations

Introduction



Learn More



Share





(upbeat music)

Edge-based analytics drive smarter operations

Introduction



Learn More



Share





it's about **people**





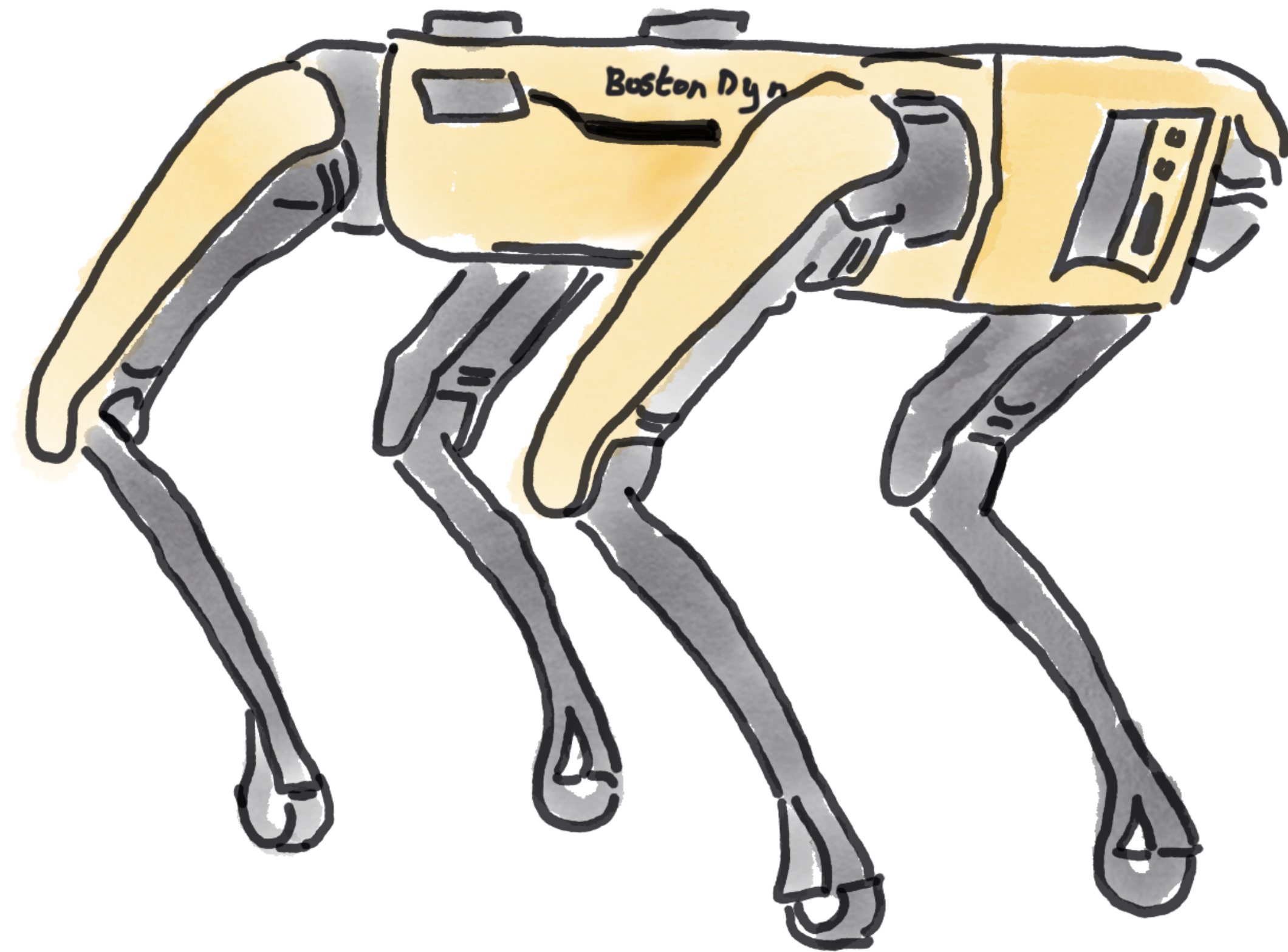
computers enable joy





computers enable independence





computers do the things we don't want to



counting fish is **boring**



ok but jobs?

human  
alarm clock



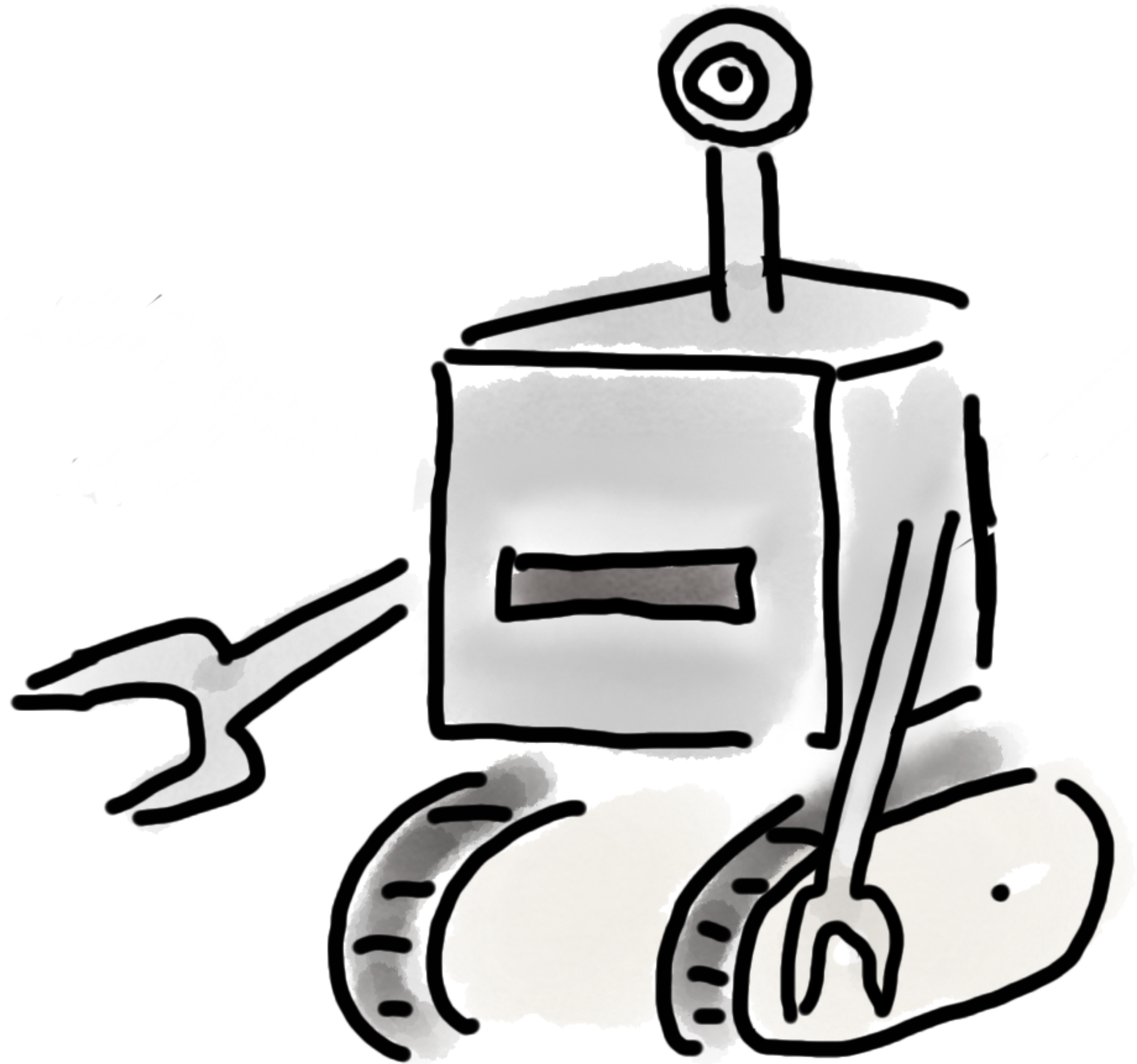


elevator operator

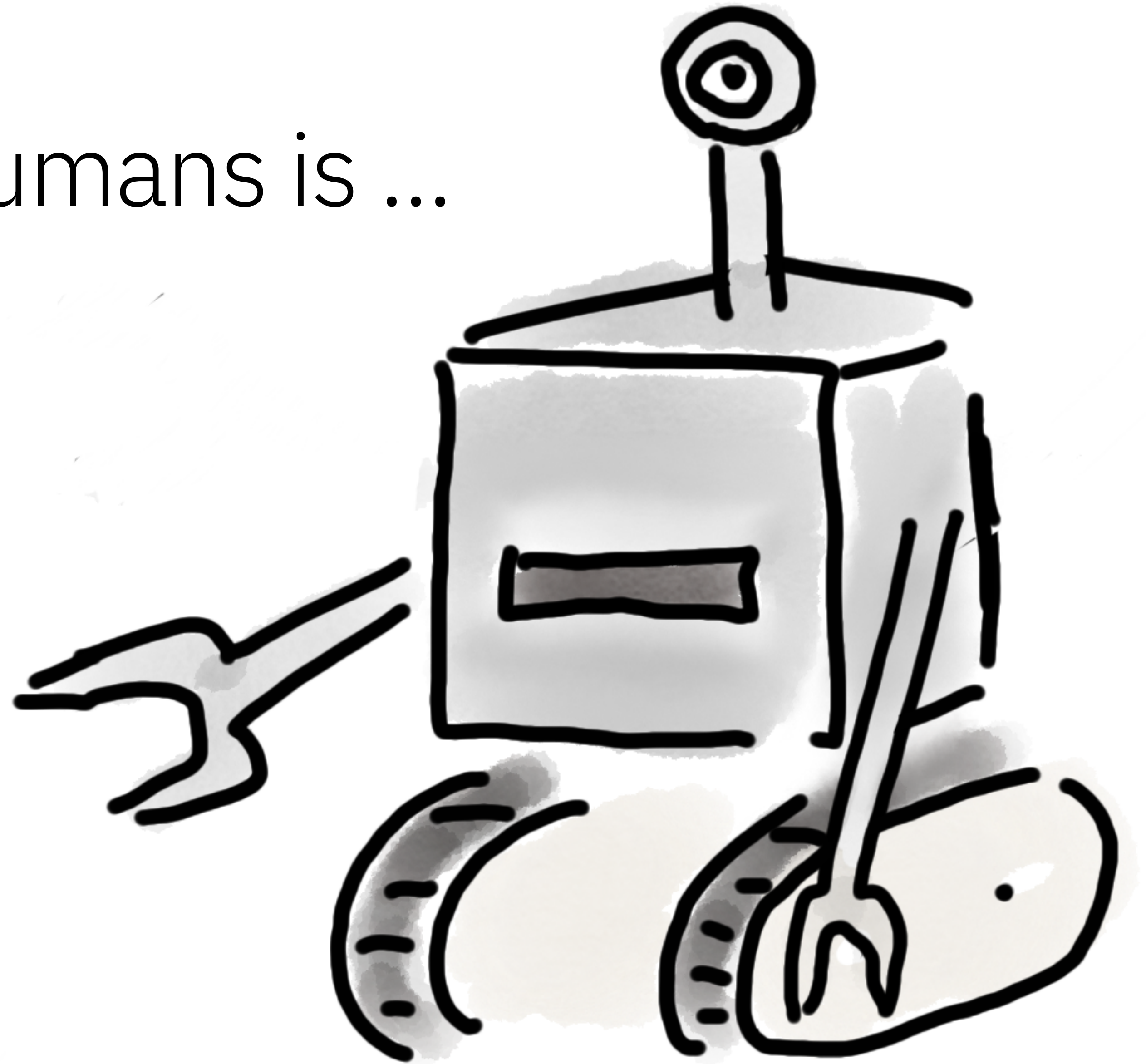
telephone

switchboard operator





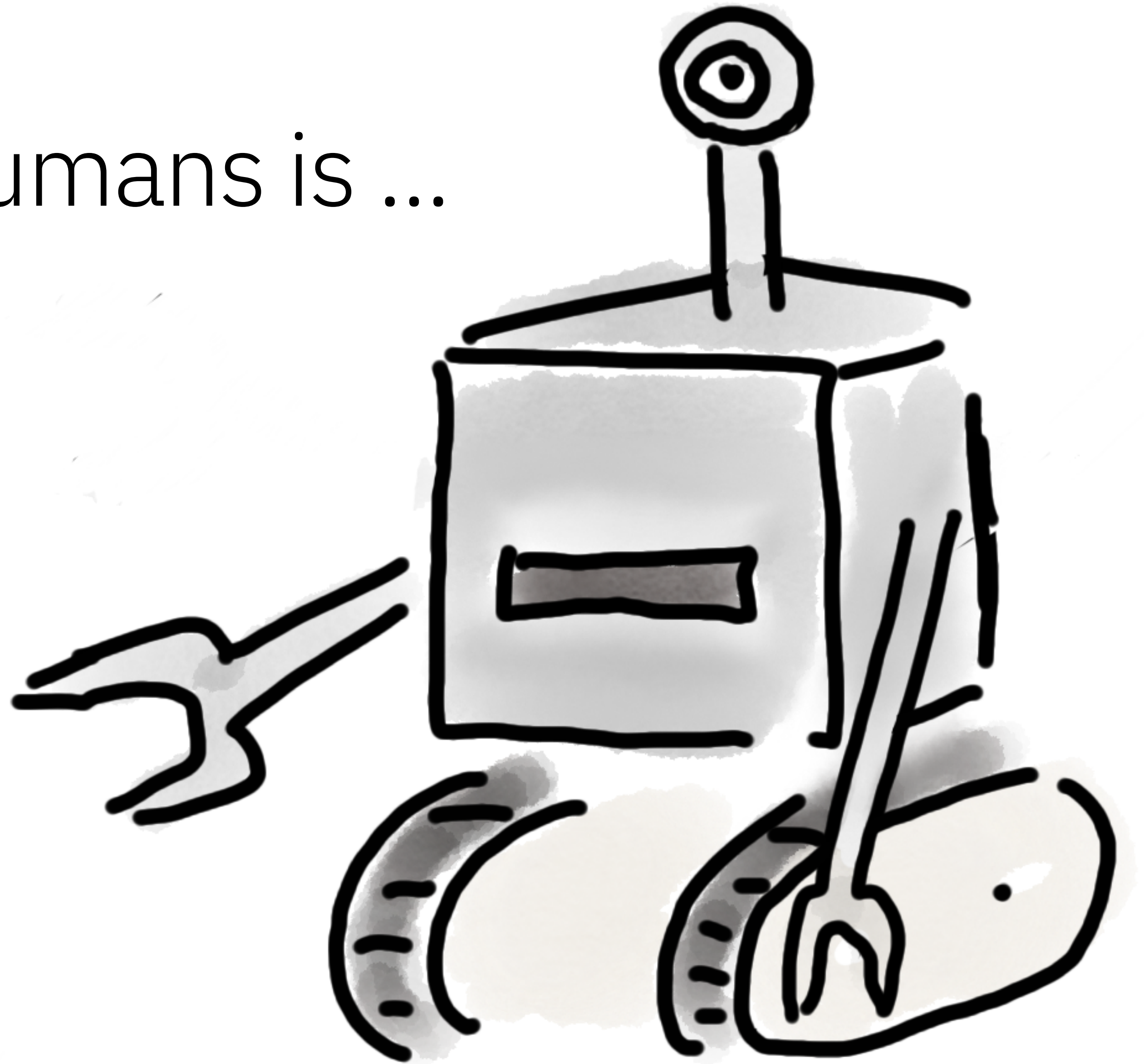
if doing a task with humans is ...





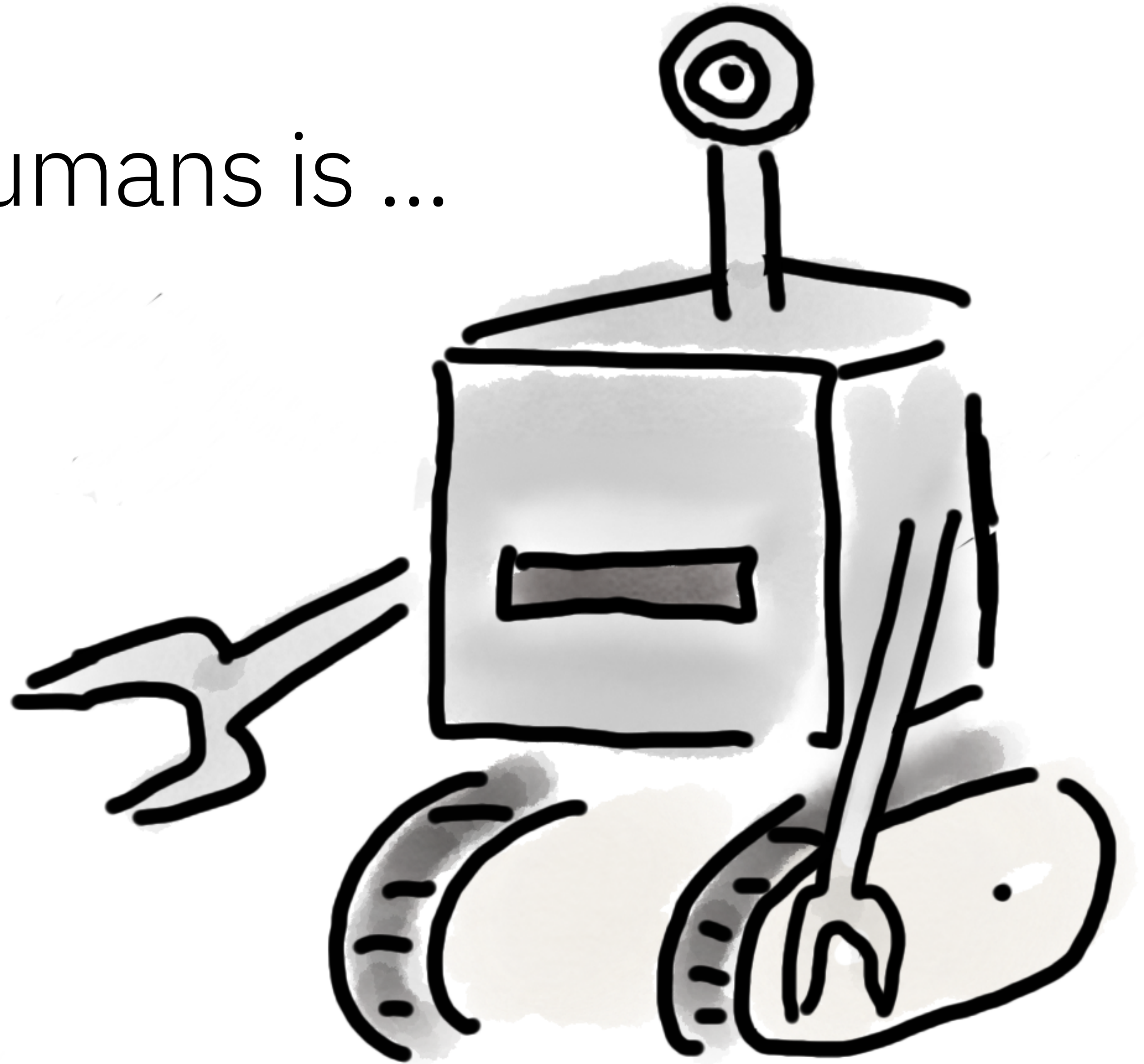
if doing a task with humans is ...

- dull



if doing a task with humans is ...

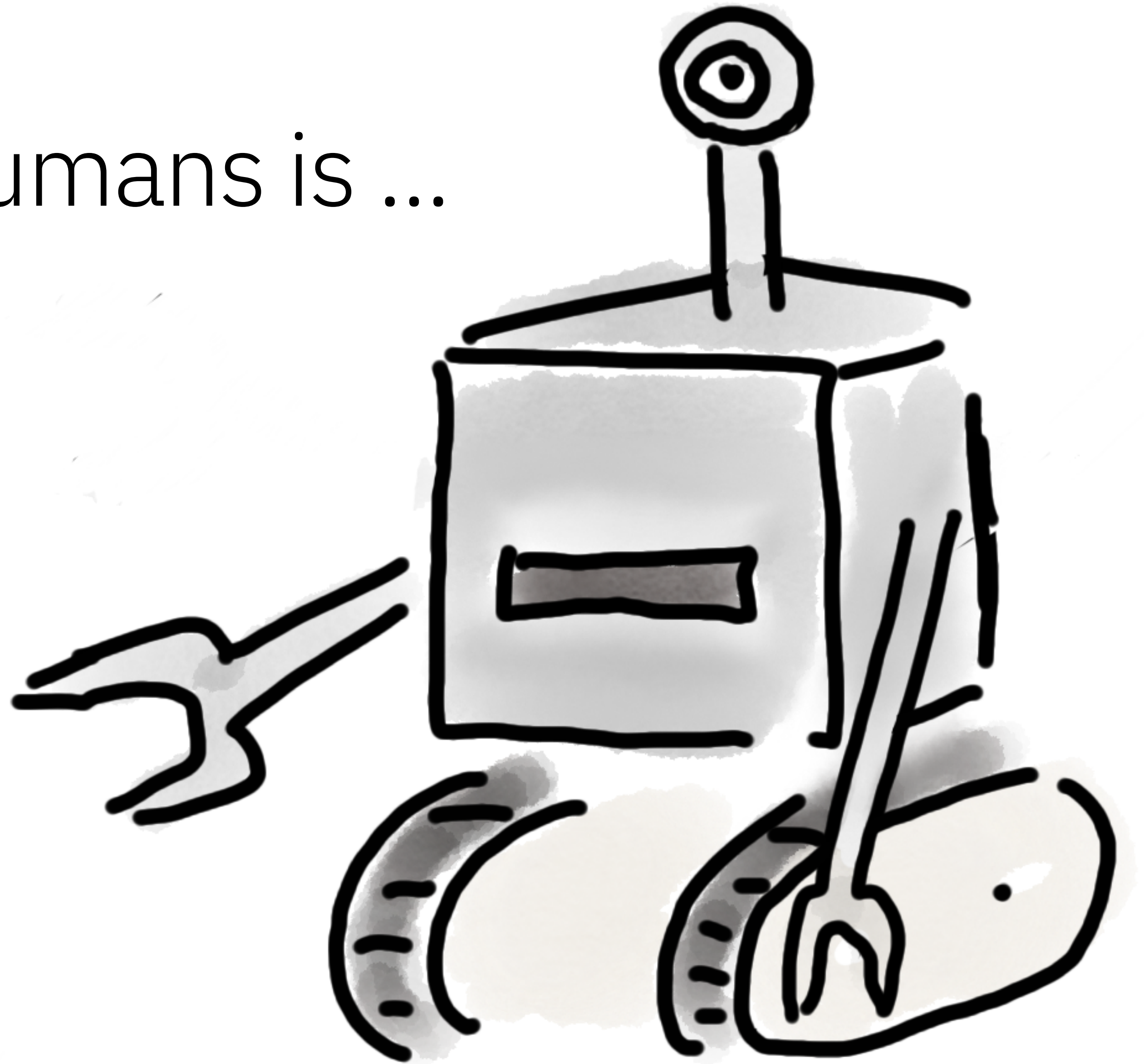
- dull
- dirty





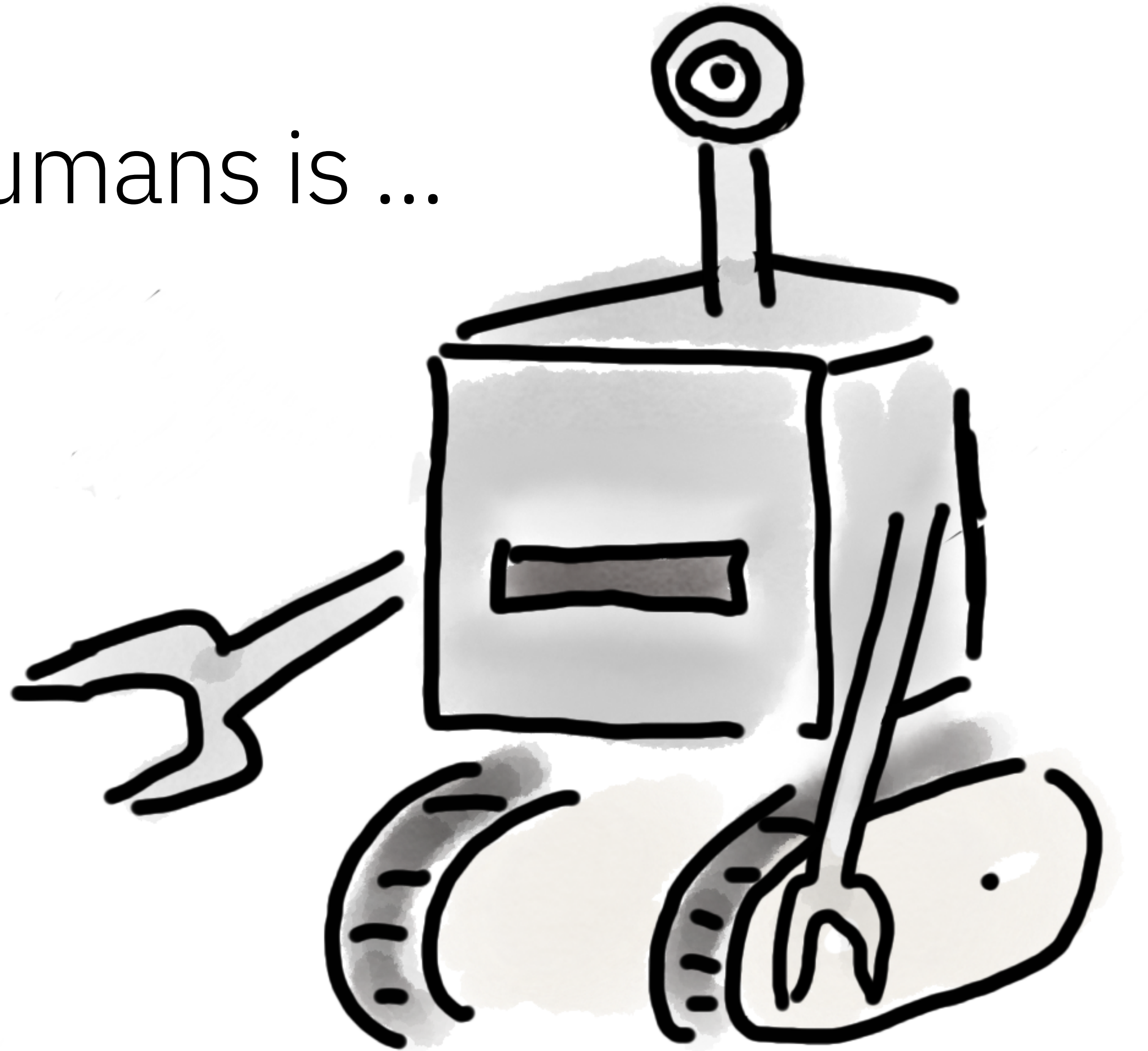
if doing a task with humans is ...

- dull
- dirty
- dangerous



if doing a task with humans is ...

- dull
- dirty
- dangerous

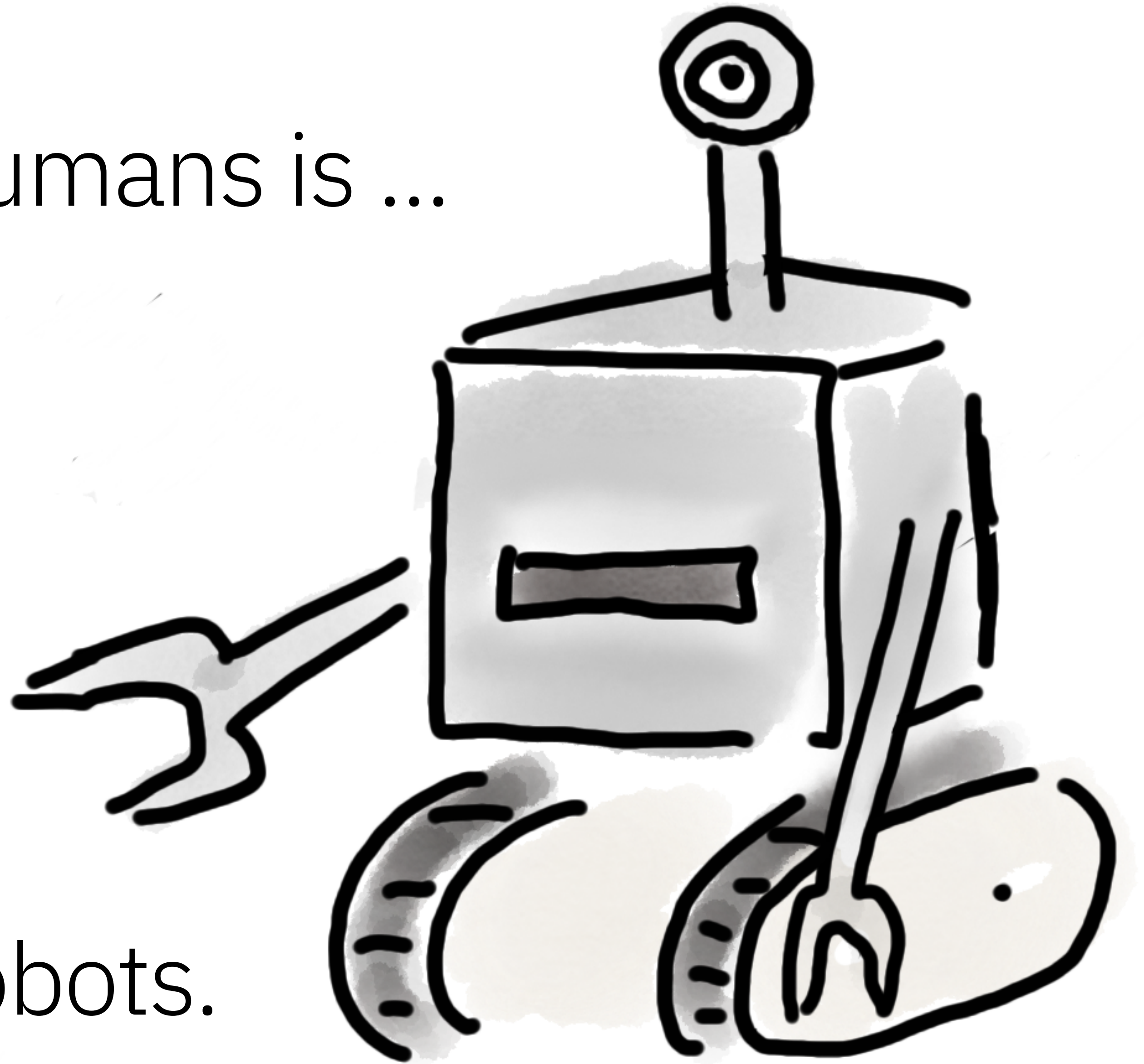




if doing a task with humans is ...

- dull
- dirty
- dangerous

... then bring in the robots.



cobot



the only constant  
is change



# change

*the ability to learn is the best skill you will have*



“independent  
learning”



be a part of the future



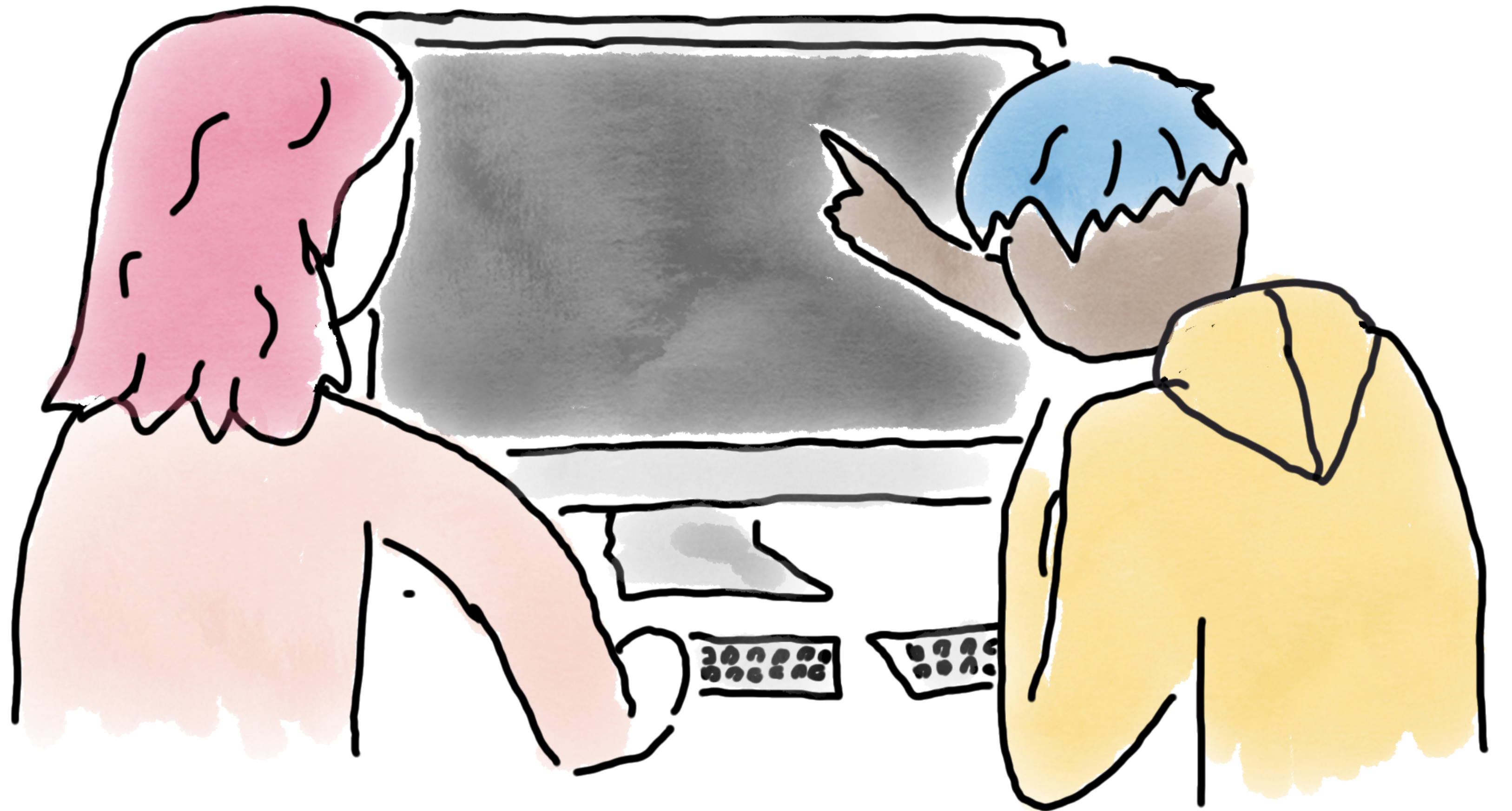
be a **part** of the future



ada's insights came  
from **collaboration**



# pair programming



tech is for everyone



tech is **better** with everyone

# technology will change the world

*be a part of it*





thank you!

@holly\_cummins

