

Digital Skills

Applied Data Science: The One Skill to Rule Them All?

Prof. Marcel Salathé, Digital Epidemiology Lab, EPFL
Academic Director, EPFL Extension School

About

Located in Lausanne on the shores of Lake Geneva, EPFL is one of Europe's most famous science and technology institutions.



A magnificent system

ETH zürich

n|w

 Universität
Basel

**UNI
FR**
■

 UNIVERSITÉ
DE GENÈVE


UNIL | Université de Lausanne

Hes·SO
Haute Ecole Spécialisée
de Suisse occidentale
Fachhochschule Westschweiz
University of Applied Sciences and Arts
Western Switzerland

Applied Machine Learning Days

January 26-29, 2019

Four days of talks, tutorials & workshops, on Machine Learning and Artificial Intelligence with top speakers from around the world. @ EPFL, Lausanne, Switzerland.

[AMLD 2019 CALLS](#)[GET TICKETS](#)

🟡 **Latest:** Tickets are now available!

ORGANIZED BY



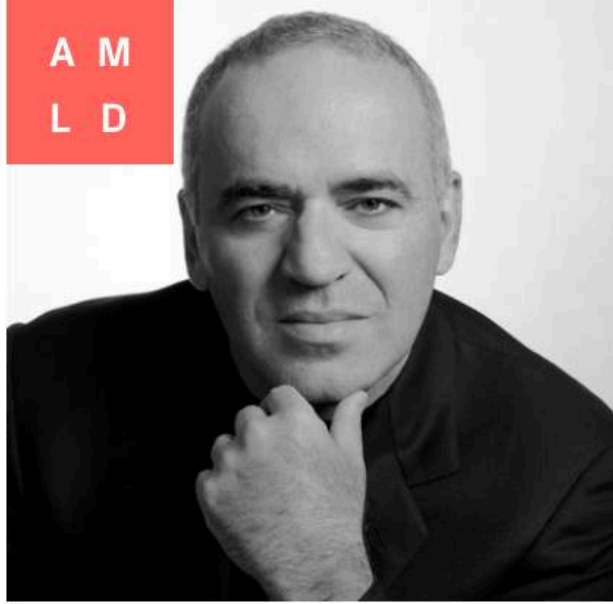
IN COLLABORATION WITH



World Health
Organization



ICRC



Garry Kasparov

Chess Grandmaster, Chairman
of the Human Rights
Foundation

[More info](#)



Zeynep Tufekci

Professor, UNCSILS - Writer,
The New York Times

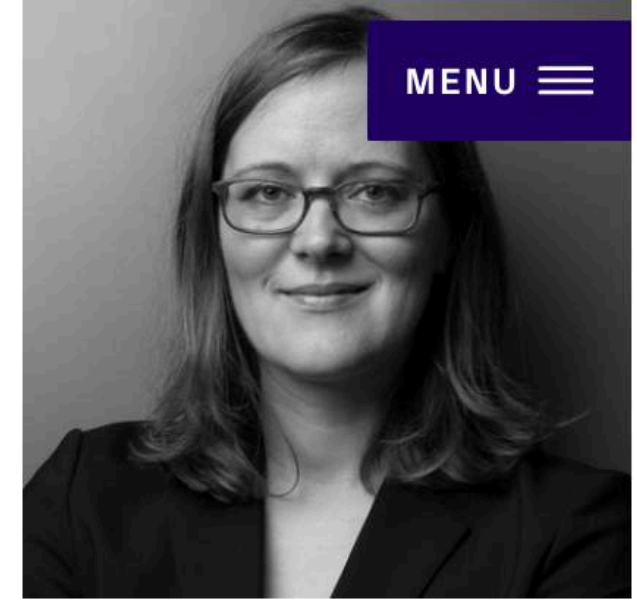
[More info](#)



Jeff Dean

Head of AI, Google

[More info](#)



Katja Hofmann

Project Malmo Research Lead,
Microsoft Research

[More info](#)



Antoine Bordes

Director, Facebook AI Research
Paris

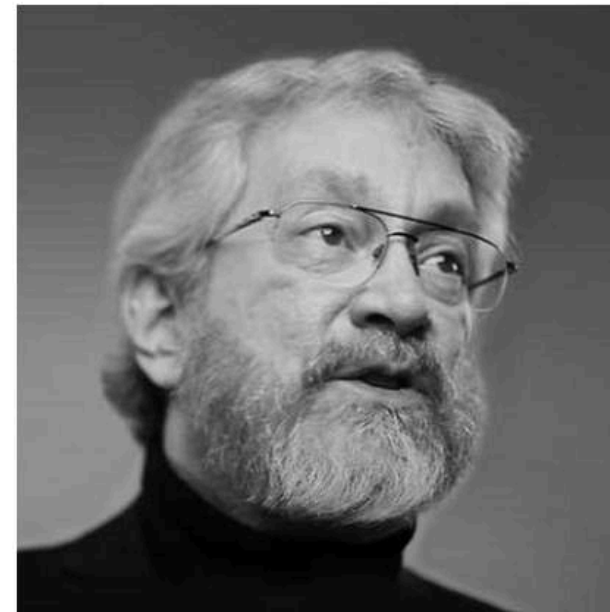
[More info](#)



Elaine Nsoesie

Professor, Boston University

[More info](#)



Alex "Sandy" Pentland

Professor, MIT Media Lab



Yuan (Alan) Qi

Vice President & AI Chief
Scientist, Ant Financial

[More info](#)



190

Speakers

184

Sessions

16

Domain-specific tracks

31

Workshop sessions

58

Workshop organizers

28

Exhibitors

31

Volunteers

4.2/5 ★★★★★

Very good attendee satisfaction†

4.7/5 ★★★★★

Excellent partner satisfaction†
(partnership expectations and outcomes met)



My own journey

From Theoretical Biologist...

Math

Statistics

...To Digital Epidemiologist

Computational Models

Big Data

Data Science

Machine Learning



DYI

Digital Upskilling

My own journey

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DYI

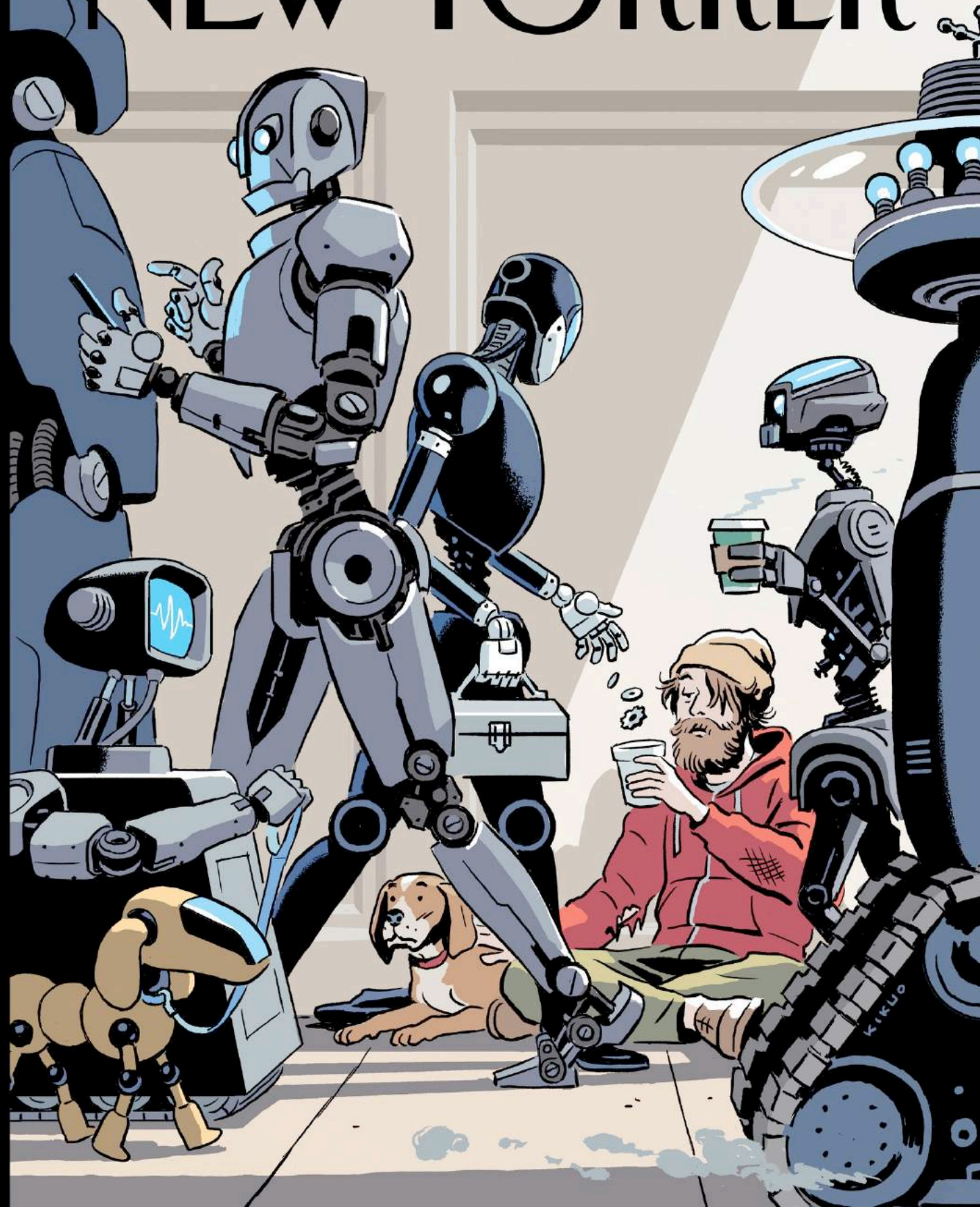
Digital Upskilling

PRICE \$8.99

THE NEW YORKER

OCT. 23, 2017

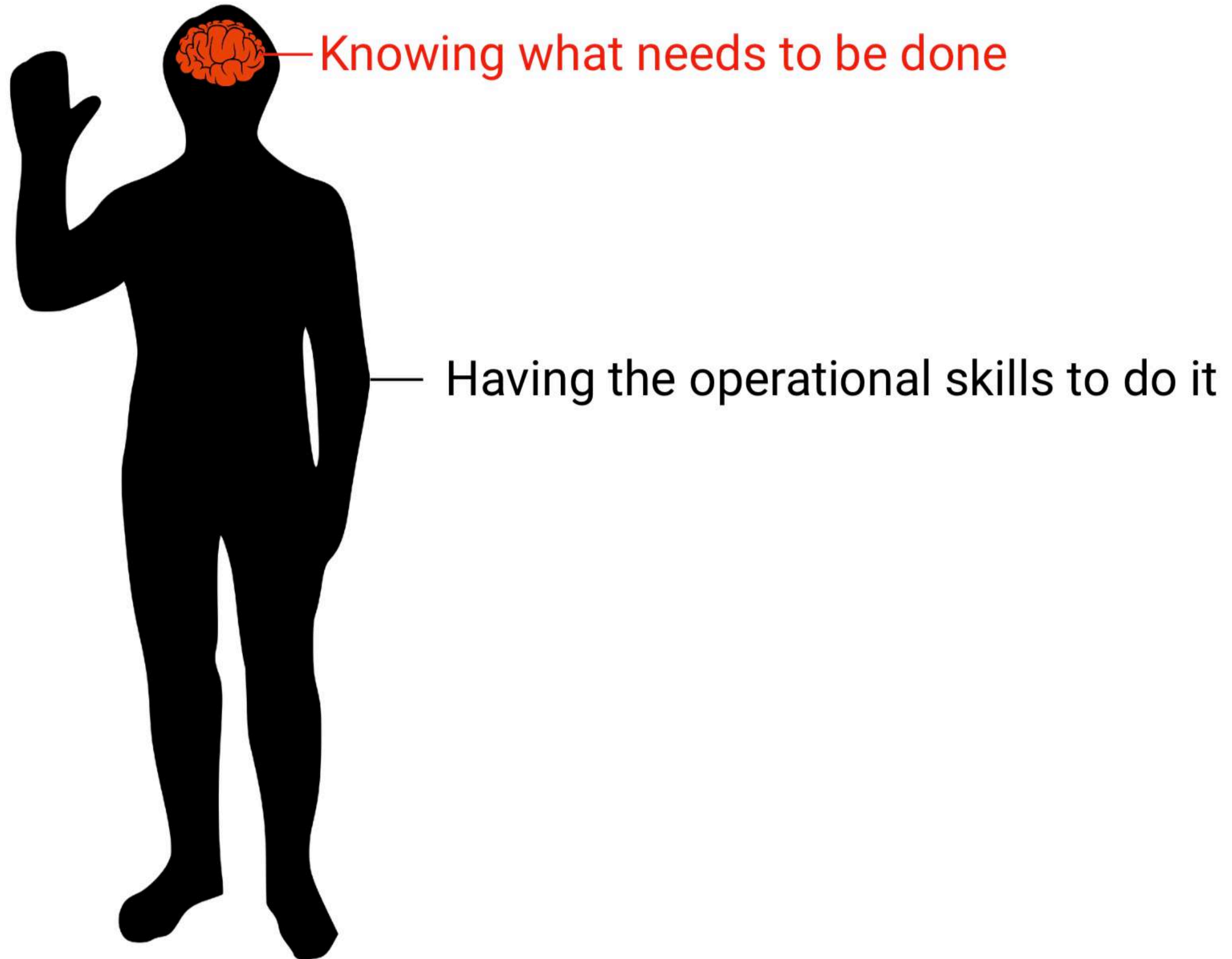
EPFL

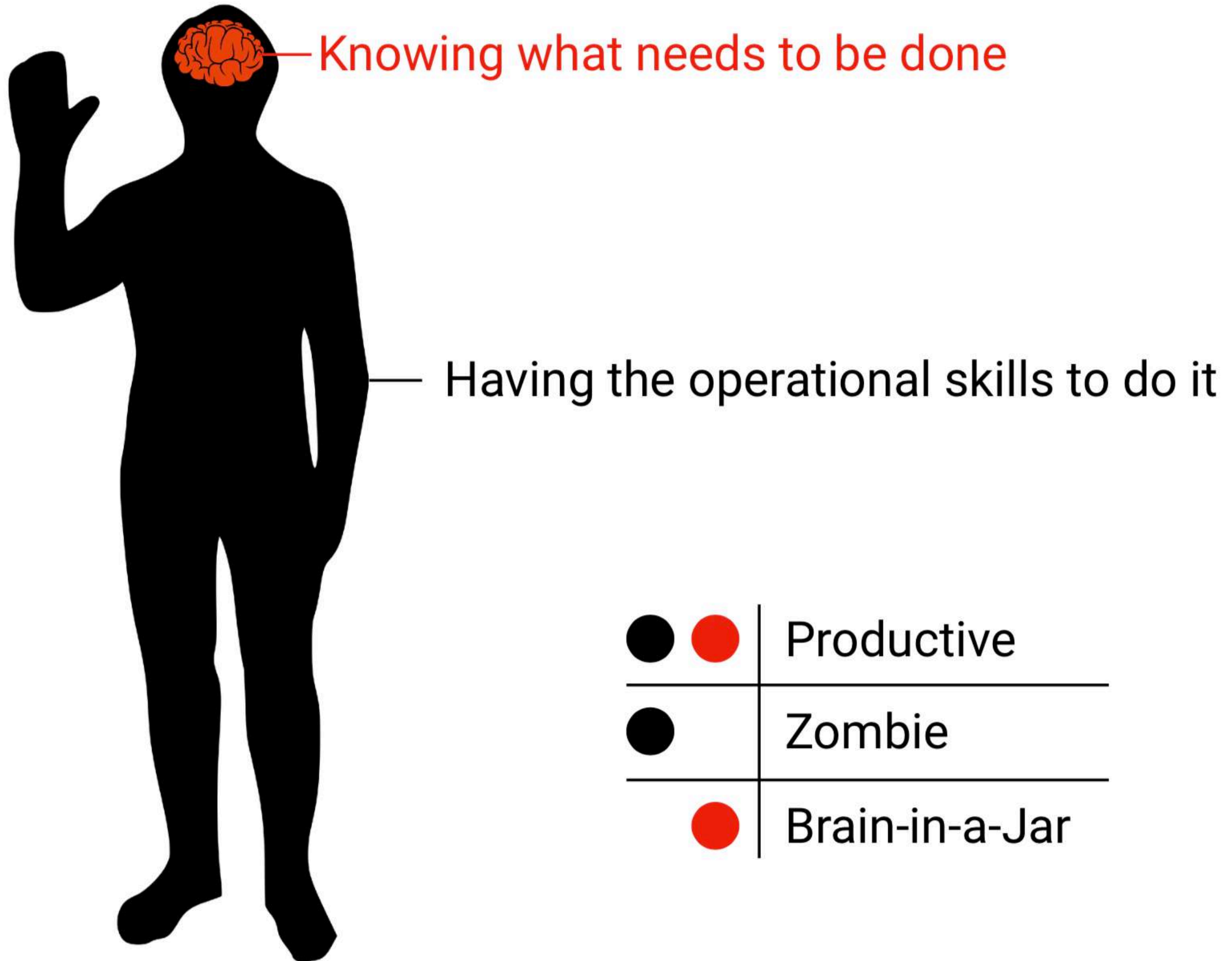


Computational / Data skills are advanced skills.

basic

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<https://exts.epfl.ch/>

**EPFL
EXTENSION
SCHOOL**

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Anthropology graduate. Assistant curator. **+ UI developer.**

Matthias learned UI Development with
the EPFL Extension School.

[View our courses & programs →](#)

FOUNDATION LEVEL COURSES

Foundations of Digital Literacy

Beginner Level

Enrollment open now

150 hours

Foundations of Data Science

Beginner Level

Enrollment open now

150 hours

Foundations of Cybersecurity and Digital Trust

Beginner Level

Enrollment open now

150 hours

Thinking and Creating with Code

Beginner Level

Enrollment open now

150 hours



INTERMEDIATE LEVEL PROGRAMS

Web Application Development

Intermediate Level

EPFL COS Diploma

Enrollment open now

450 hours

Applied Data Science: Machine Learning

Intermediate Level

EPFL COS Diploma

Enrollment open now

450 hours

Applied Data Science: Communication & Visualization

Intermediate Level

EPFL COS Diploma

Launching Q1 2020

450 hours

ADVANCED LEVEL COURSES

UI Development with React.js

Advanced Level

Enrollment open now

75 hours

Artificial Intelligence with Deep Learning

Advanced Level

Launching Q1 2020

75 hours

Big Data & Cloud Analytics

Advanced Level

Launching Q2 2020

75 hours

CERTIFICATE OF OPEN STUDIES



OUR OFFER IS DESIGNED FOR FULL-TIME PROFESSIONALS



Michael Baeriswyl

@michaelbaeris

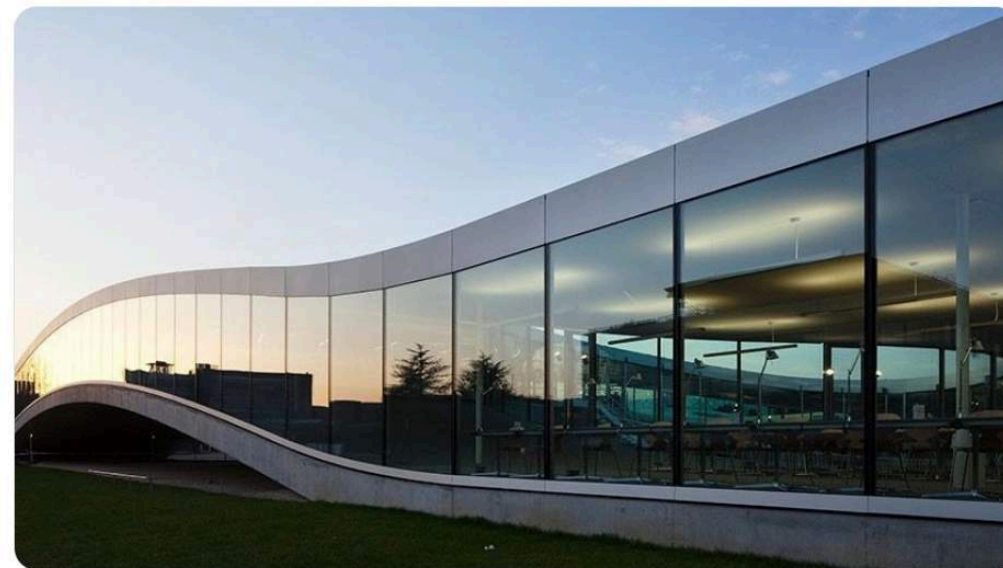
Following



We will educate over 1000 employees in the modern ways of working with #data and applying #AI.

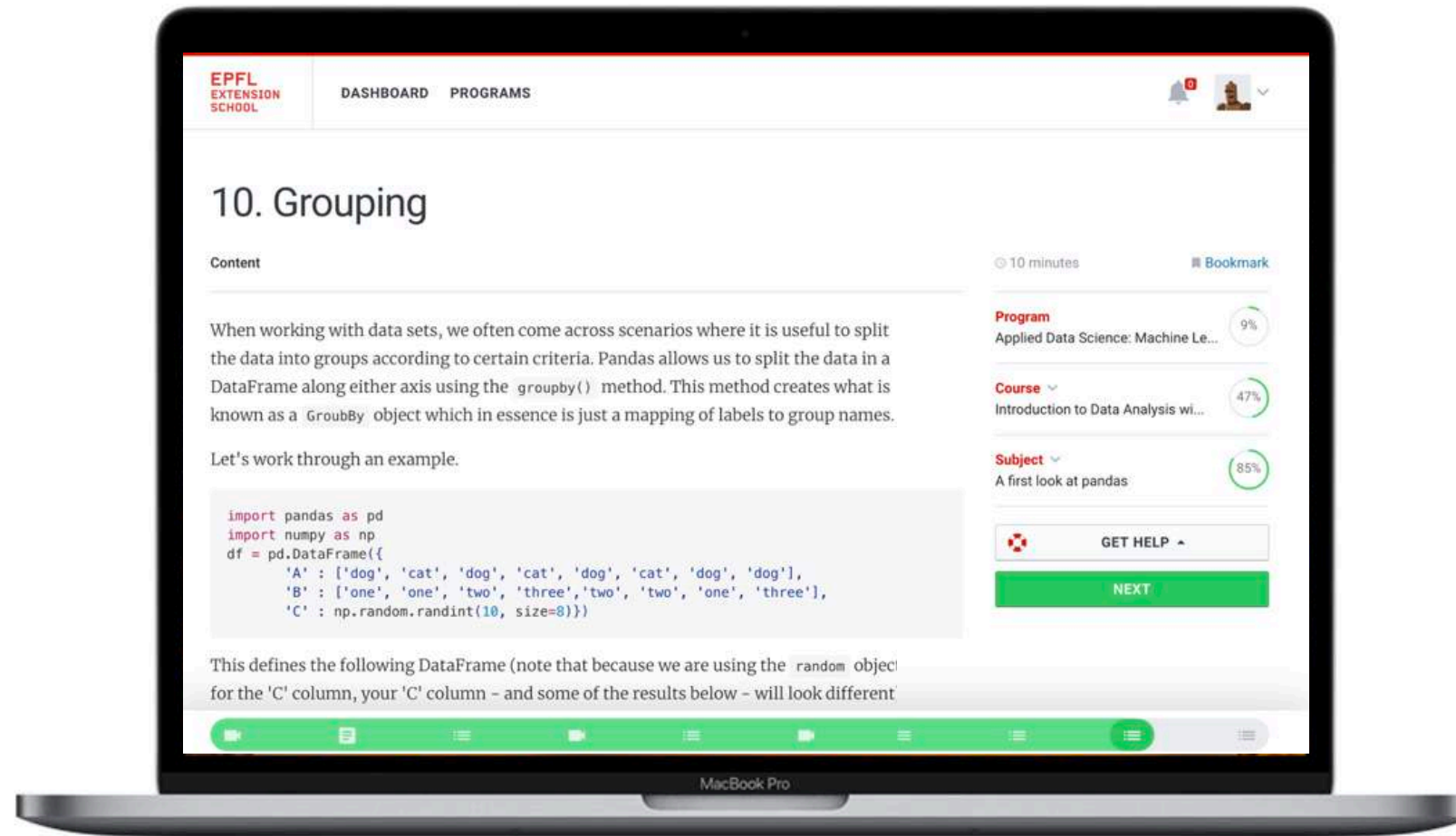
@Swisscom_de partners with @epfl_exts to access top-tier classes and #learning resources about data, analytics and AI.

Thank you, @marcelsalathe @EPFL @MartinVetterli!



9:00 PM - 13 Dec 2018

OUR LEARNING PLATFORM



Custom built / Swiss-made

Compliant with GDPR and Swiss regulations

EPFL-owned

What is Data Science

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Get the Data

I/O, Cloud, Web, Scripting, Filesystems, APIs, etc.

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Graphics Libraries, Web, Frameworks, etc.

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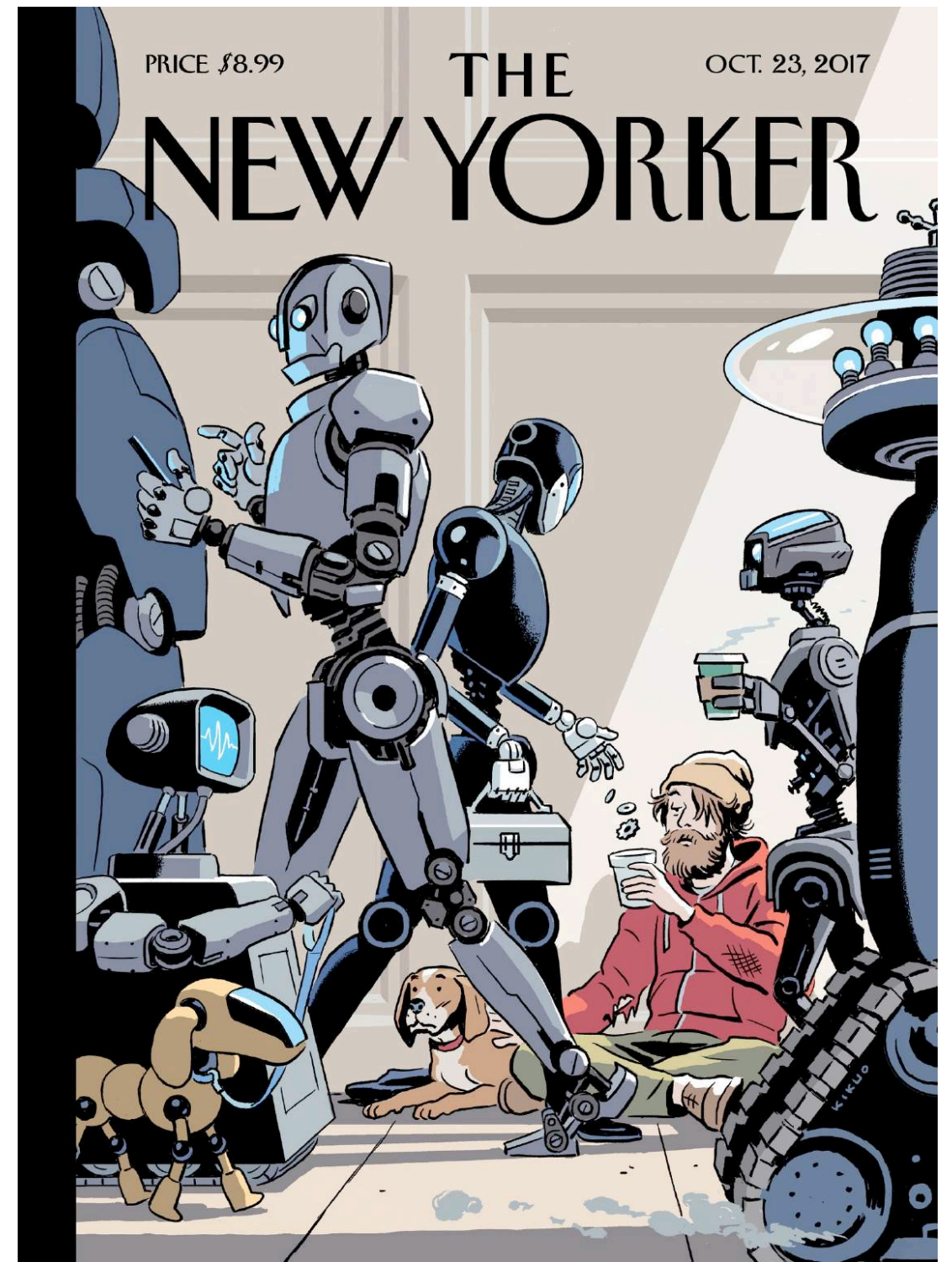
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AI is Machine Learning

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A hype?

Sept 1 - Sept 13, 2019

Machine Learning Papers:

Blockchain Papers:

(on arXiv)

A hype?

Sept 1 - Sept 13, 2019

Machine Learning Papers: **1'174**

Blockchain Papers:

(on arXiv)

A hype?

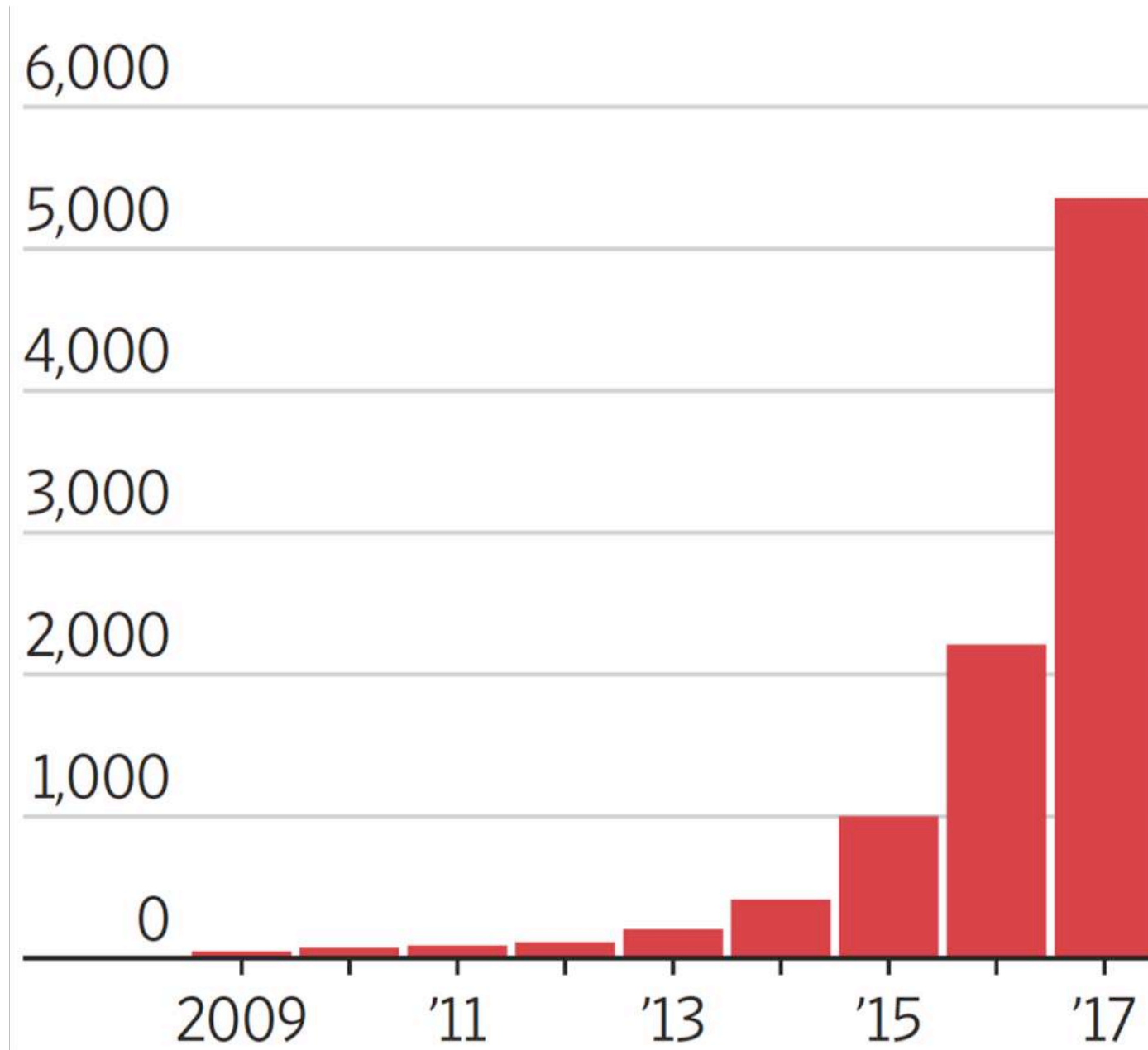
Sept 1 - Sept 13, 2019

Machine Learning Papers: 1'174

Blockchain Papers: 26

(on arXiv)

Deep Learning - it works



Number of papers with "Deep Learning" in the title or abstract (excluding preprints)

AI vs...

AI vs...

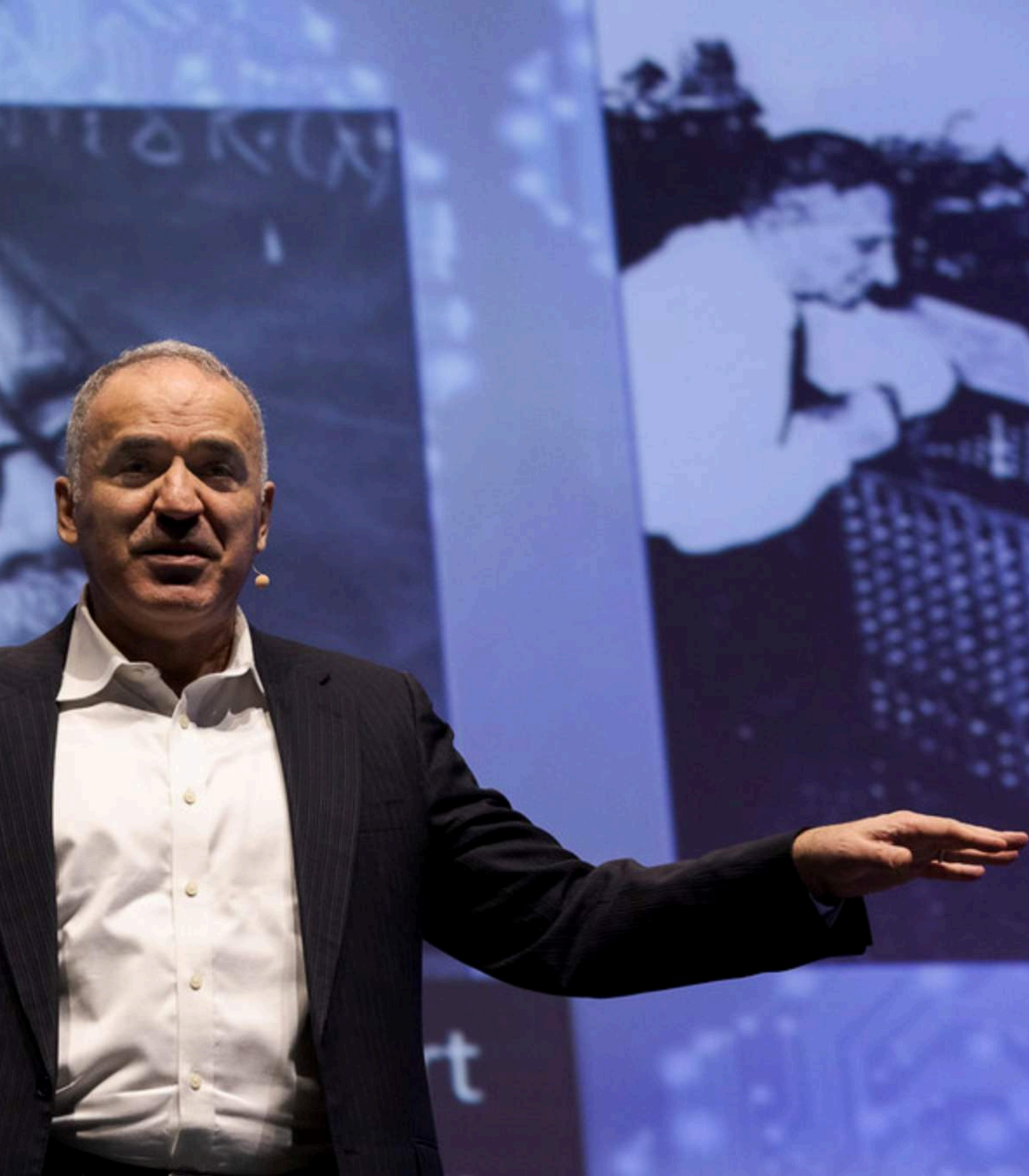
**You know what's even better
than AI?**

AI vs...

**You know what's even better
than AI?**

AI & you.

AI + x > AI



**“We’re not
being
replaced.
We’re
being
promoted!”**

X vs...

X vs...

$AI + x > x$

X vs...

AI + x > x

“AI will not replace doctors.
Doctors with AI will replace
doctors.”

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Takes training

The One Skill to Rule them All?

The Data Science Pipeline is the scaffold of the Data Economy. Everything is affected: Social Systems, Political Systems, etc.

“There are two types of politicians - those who know how to utilize Facebook, and those who loose.”

Data Science Skills = Digital Literacy

The One Skill to Rule them All?

Top 5 Hard Skills in 2019 (LinkedIn):

1. Cloud Computing
2. Artificial Intelligence
3. Analytical Reasoning
4. UX Design
5. Mobile App Development

Vision 2024

In 5 years: 50% of the employable Swiss population (2.5M people) shall have basic technological competences and some programming skills.

Everything is in place - **it is 100% a question of political will.**