

Look ahead

Applied Machine Learning with R

www.therbootcamp.com

@therbootcamp

January 2019

Hello Machine Learning Experts!

In 2 days, 6 sessions, and 16 hours you have come a long way.

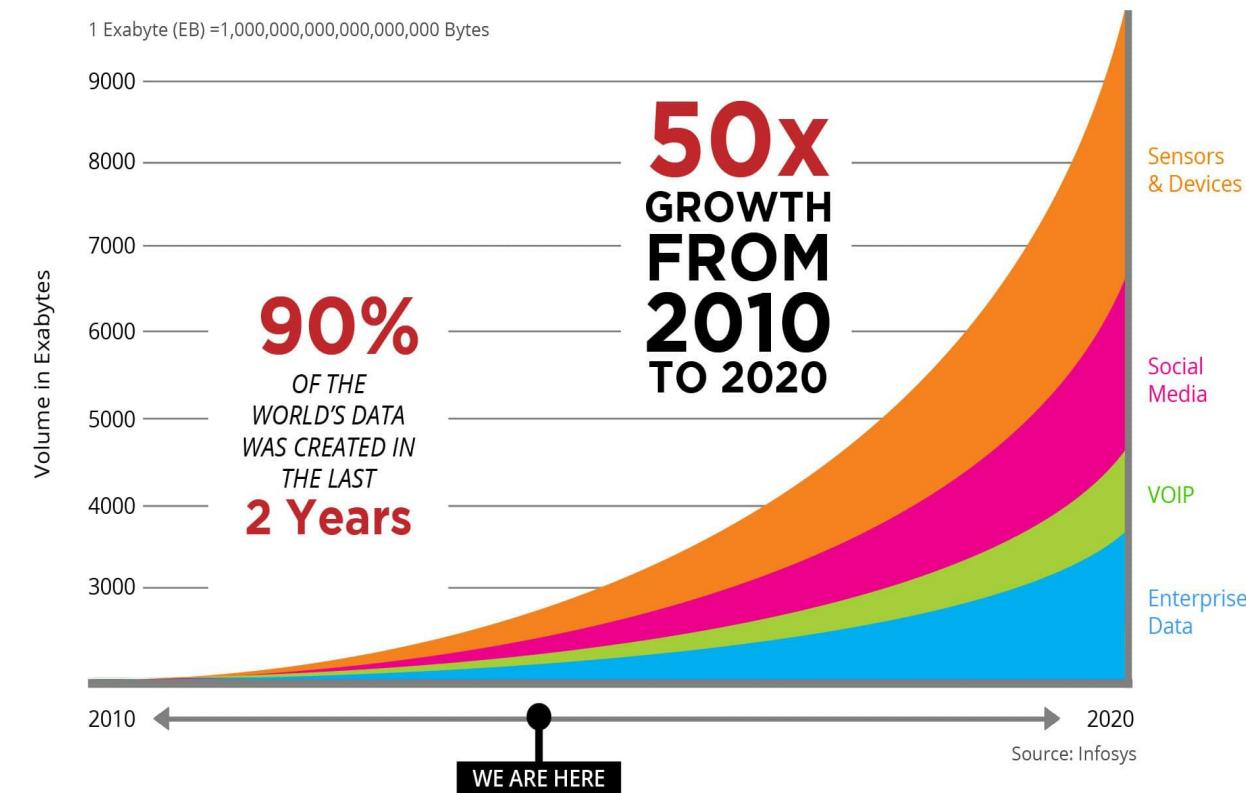
	Sat, 19 Jan	Sun, 20 Jan
0900	Welcome	Recap
0930	What is ML	Optimization +Practical
	R for ML +Interactive	
1200	Lunch	Lunch
1300	Fitting +Practical	Features +Practical
1500		
1530	Prediction +Practical	Models +Practical
1700		Look ahead
1800	Wrapup	Apero

Welcome to the Data Revolution

Financial times, July 2018

The Economist, May 2017

NZZ, August 2018



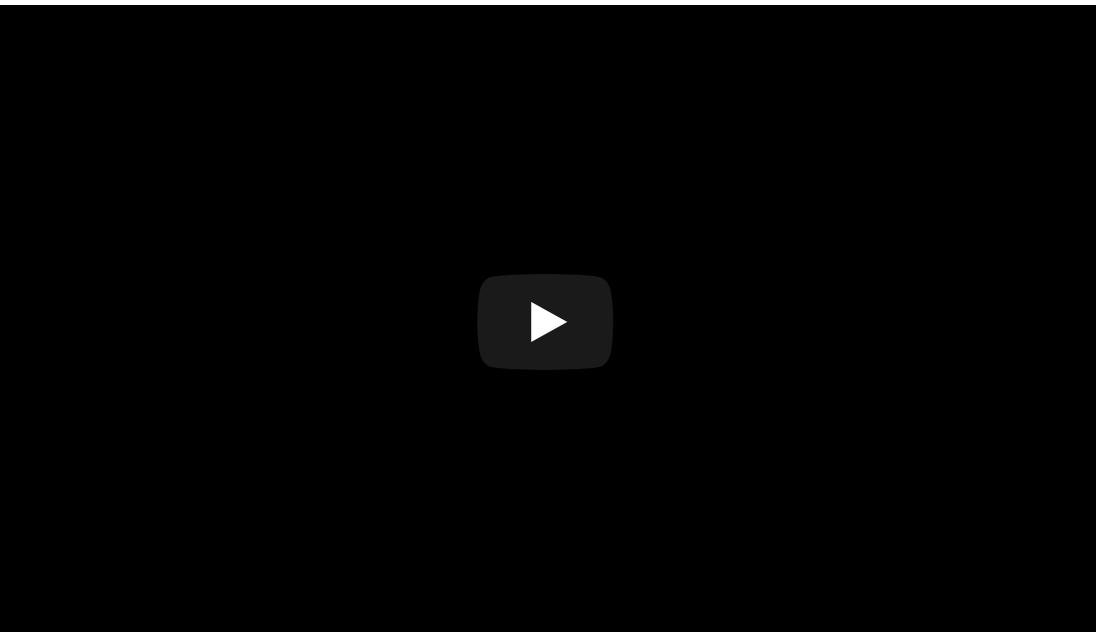
Alpha Go Zero

March, 2016

Trained on the basis of previous games,
AlphaGo beats Lee Sedol, a former
World Champion of Go.

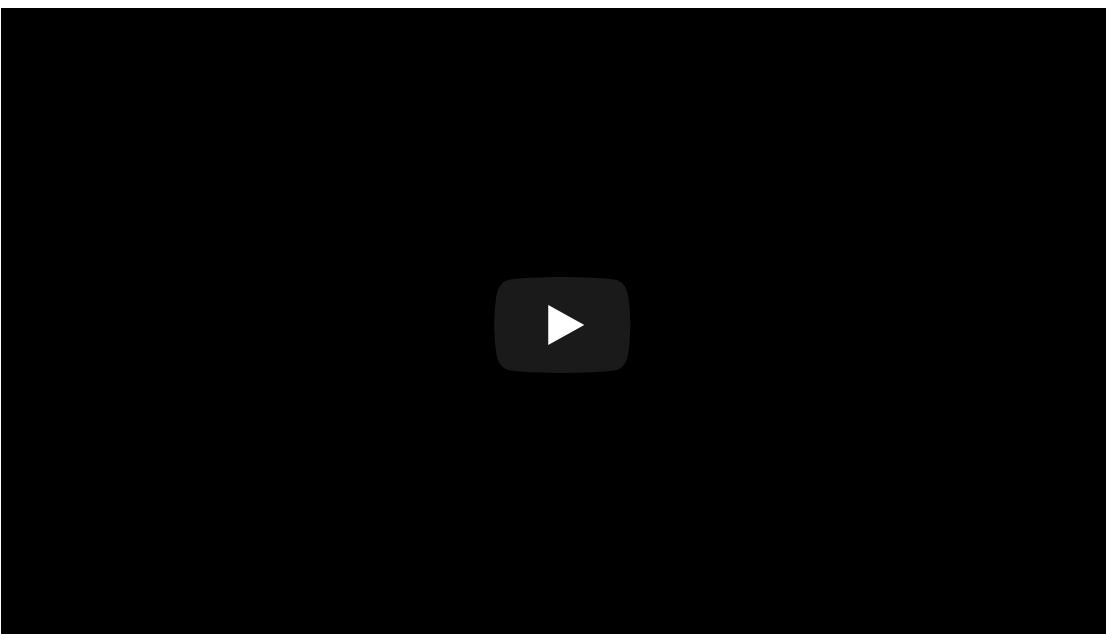
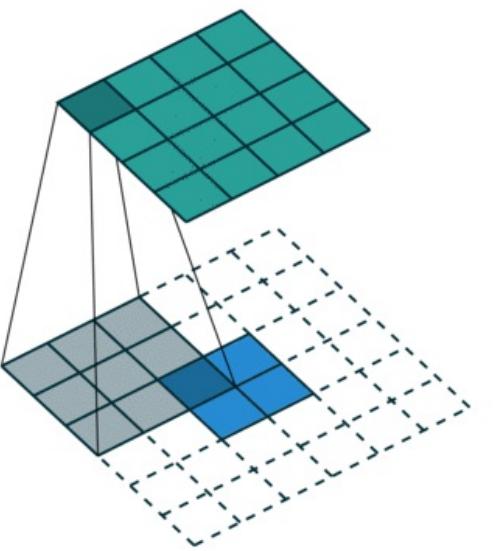
Mai, 2017

An improved Version of AlphaGo beats
Ke Jie, the current world nr. 1 at the
time.



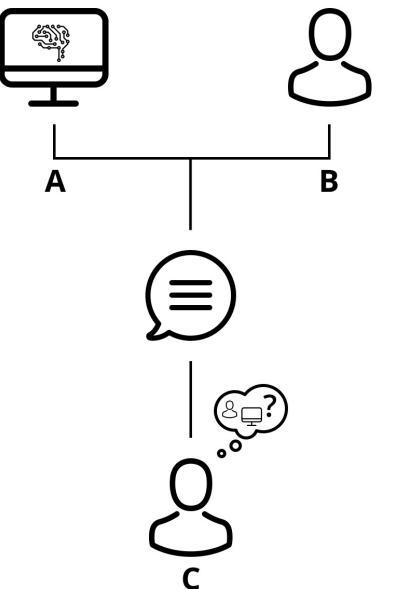
YOLO

State of the art object recognition using
Convolutional Neural Networks (CNN).

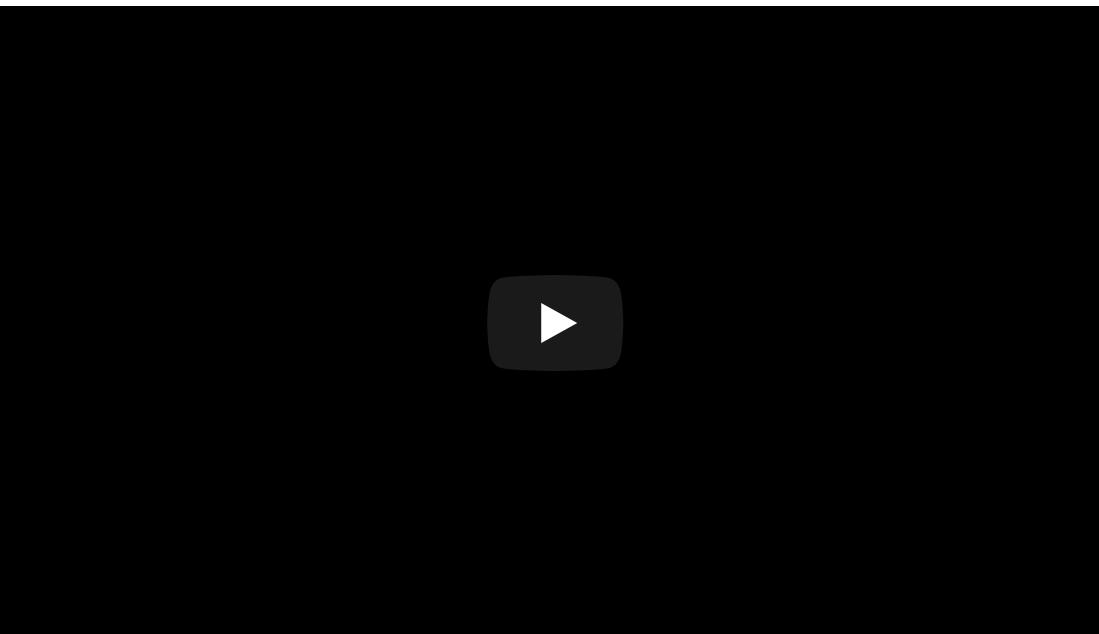


Turing Test

Turing test

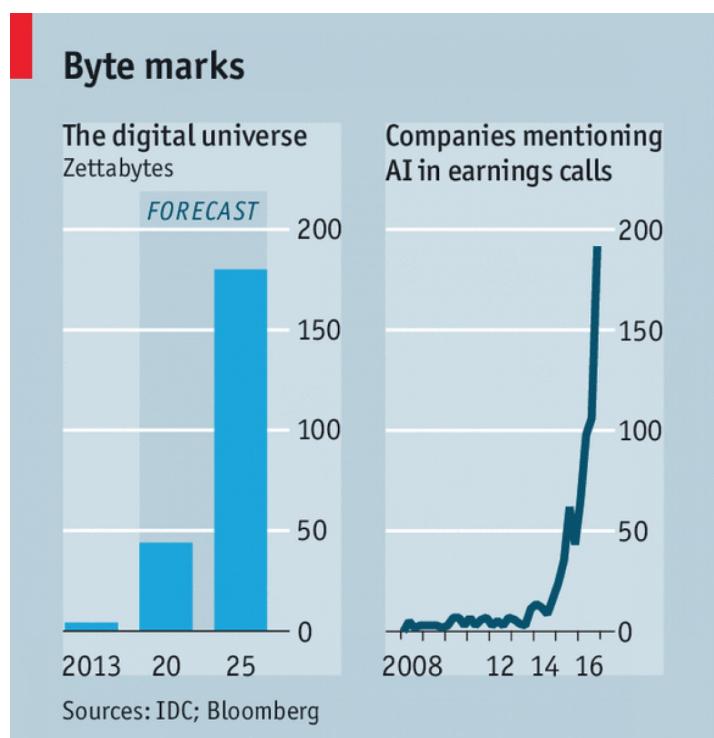


Google Duplex

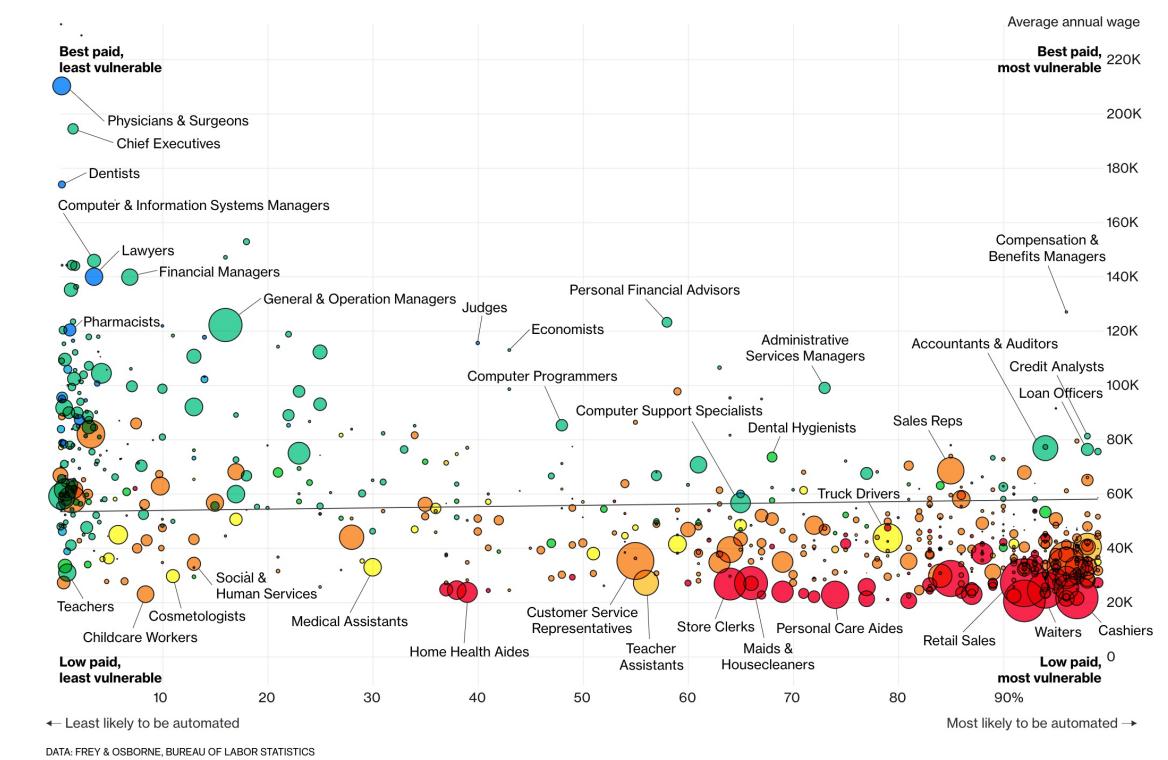


Changes to the economy

Businesses employ AI/ML

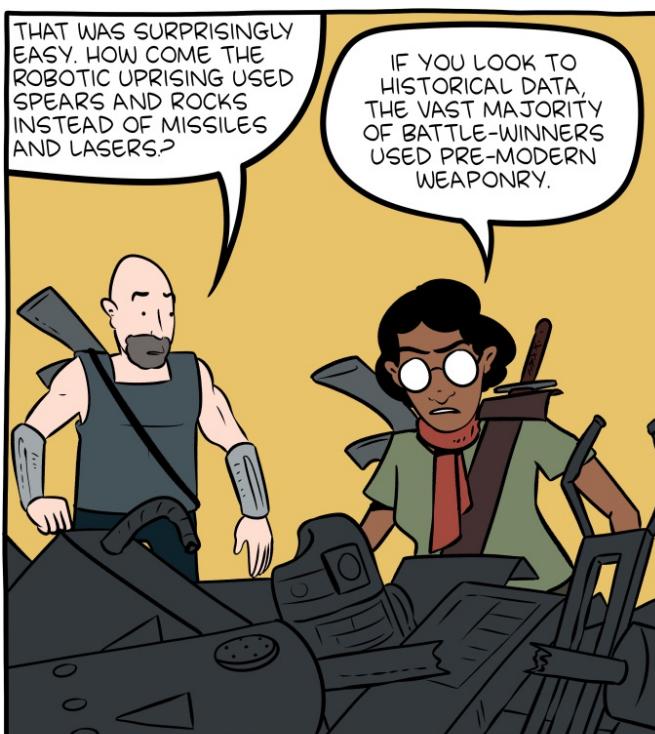


Jobs become obsolete



Repeating the past

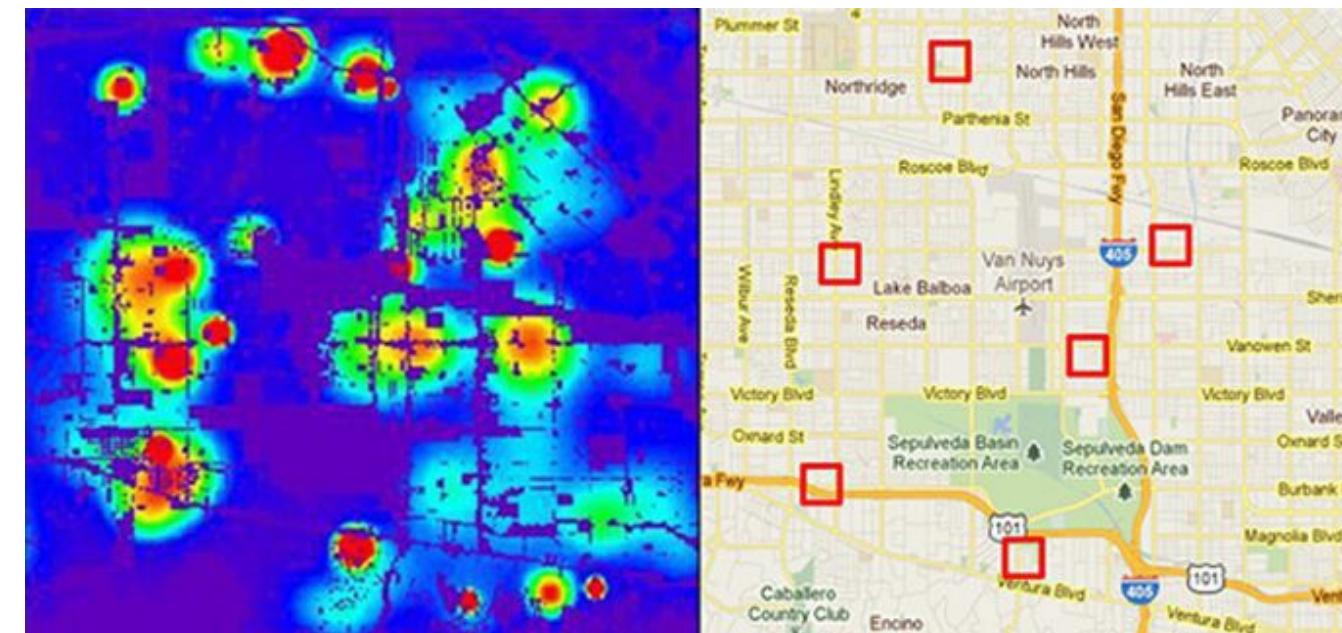
A nerdy cartoon



Thanks to machine-learning algorithms,
the robot apocalypse was short-lived.

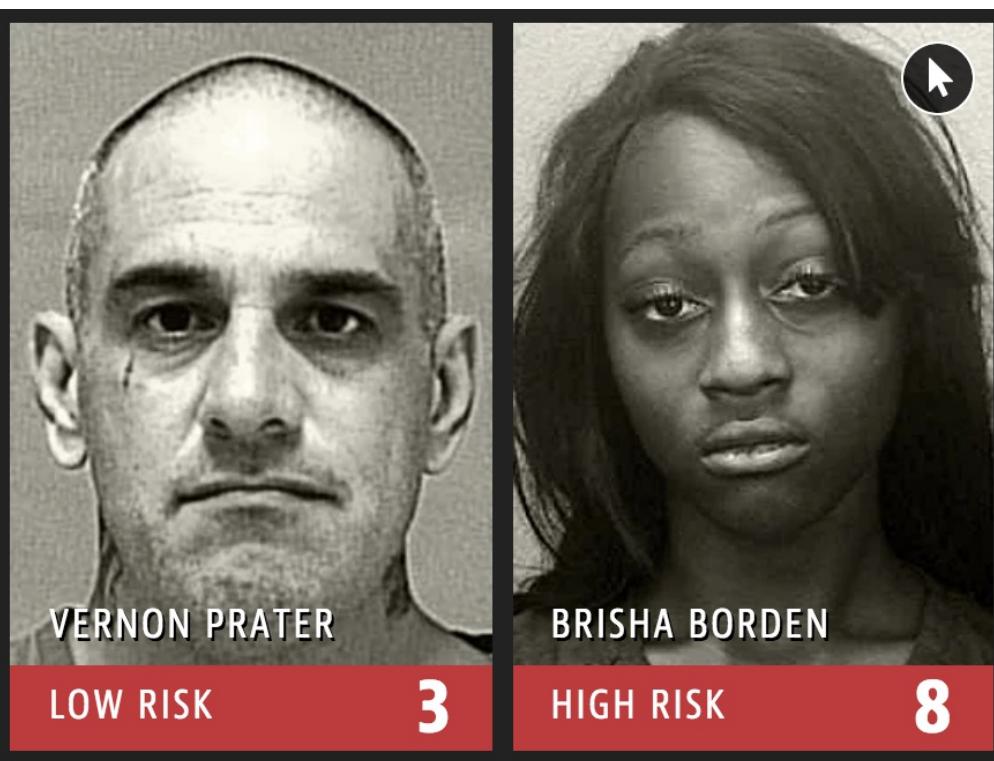
The real world: Predictive policing

The Economist
Harvard Civil Rights Review



Repeating the past

Recidivity risk scores



Empirical evaluation

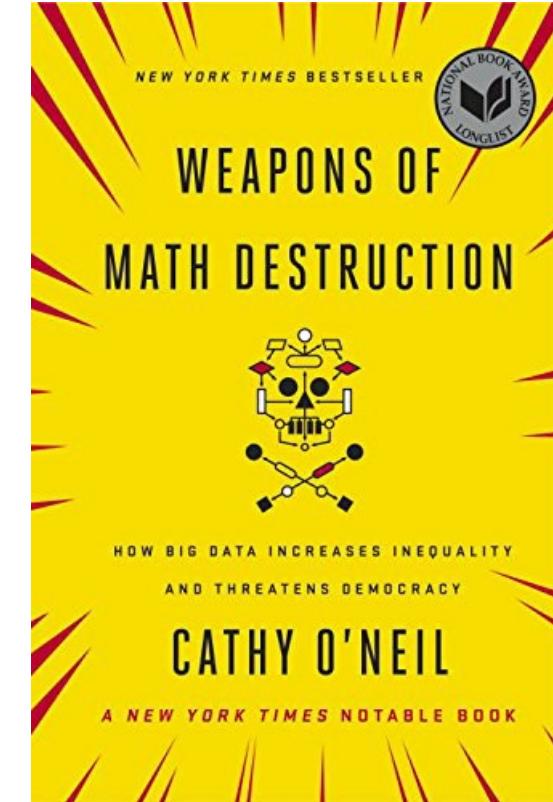
Pro Publica I, Pro Publica II

	WHITE	AFRICAN AMERICAN
Labeled Higher Risk, But Didn't Re-Offend	23.5%	44.9%
Labeled Lower Risk, Yet Did Re-Offend	47.7%	28.0%

"Objective" = Good?



See [Guardian](#), [Bloomberg](#)



Consider simple

[Full text]

Andy Haldane, Director for Financial Stability, Bank of England

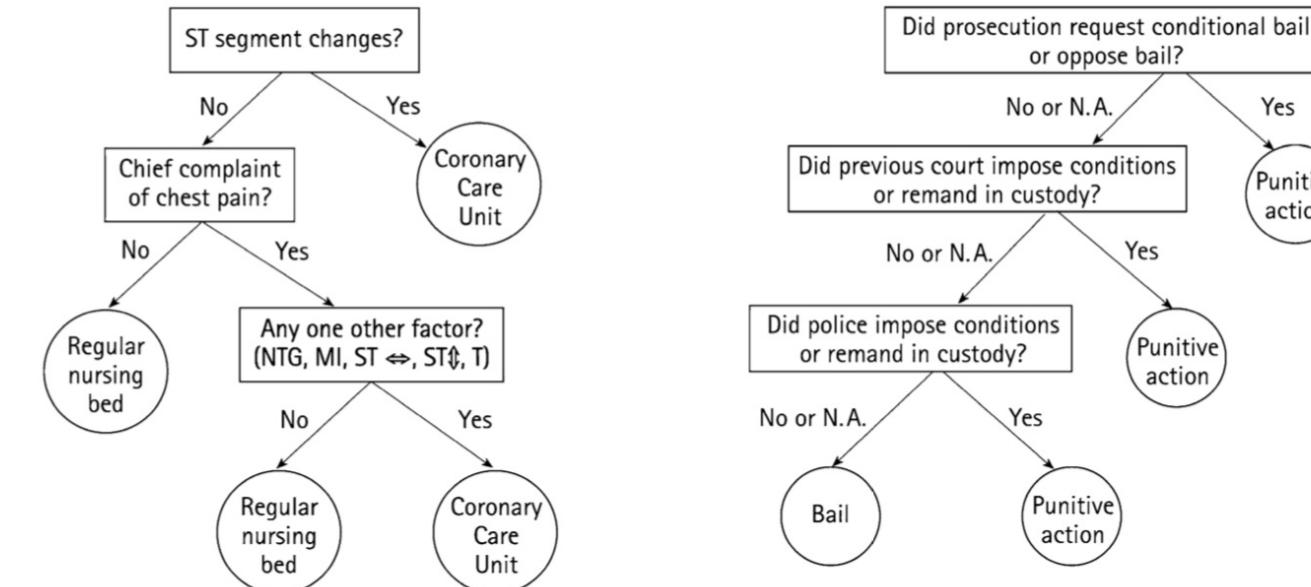
Background readings

Gigerenzer & Gaissmaier (2011)
Phillips et al. (2017)

R packages
FFTrees

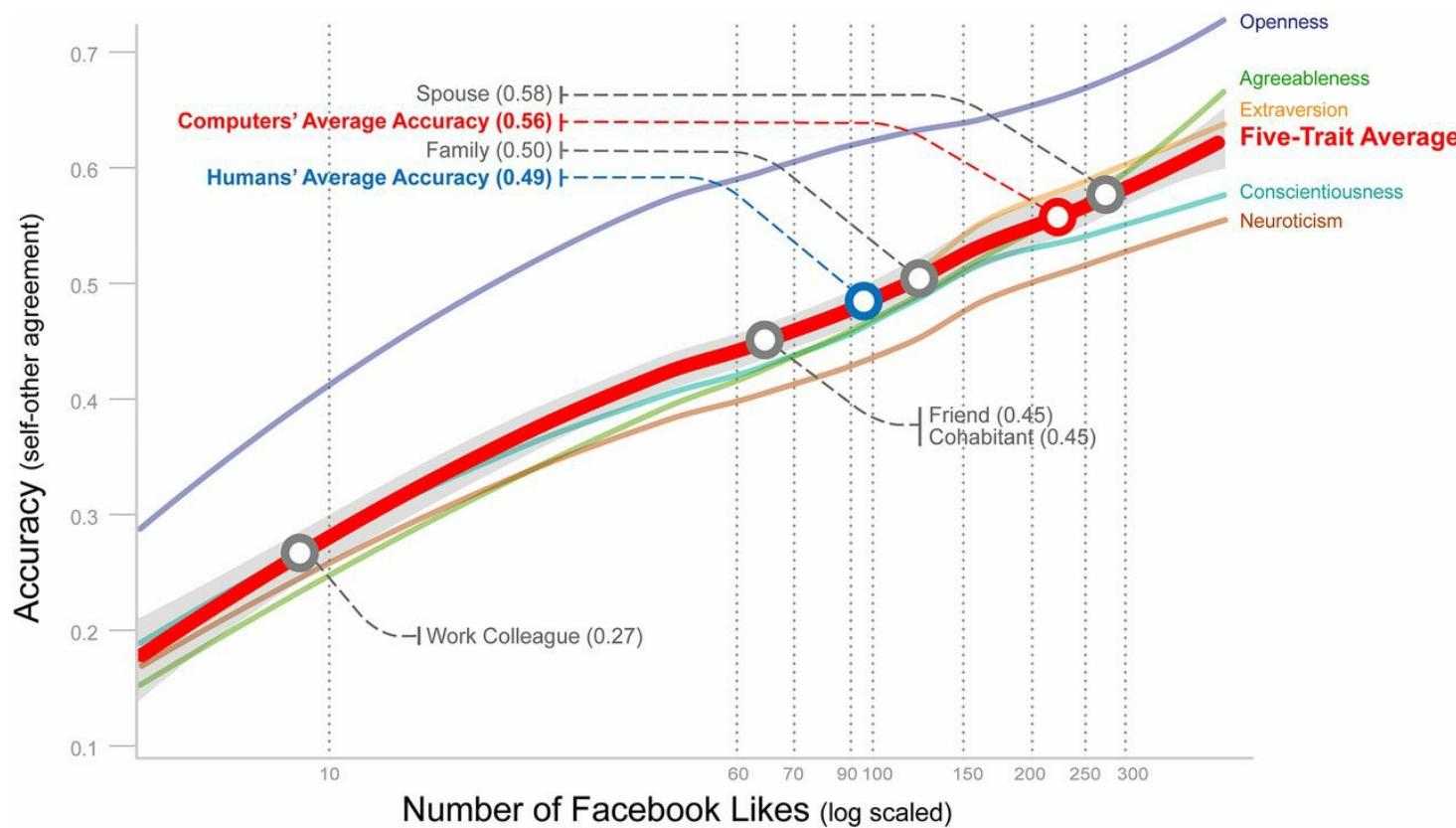
Fast and Frugal Trees

Fast, communicable, open and often surprisingly successful decision algorithms.



The end of privacy

Michal Kosinski, Stanford University [\[Full text\]](#)



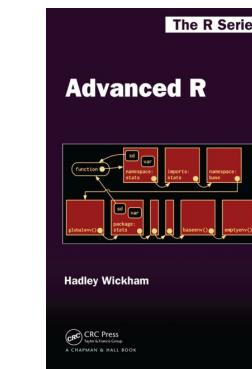
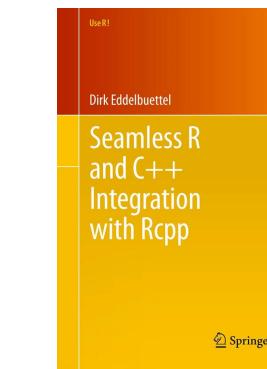
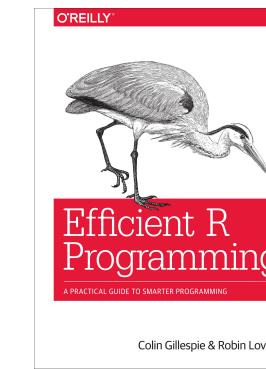
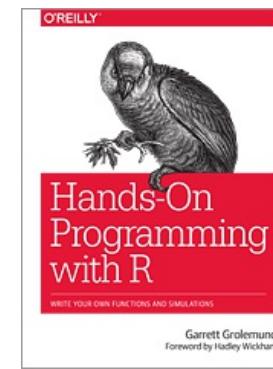
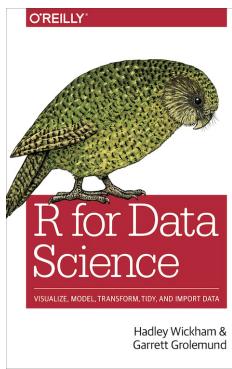
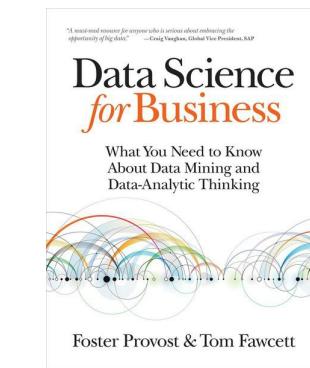
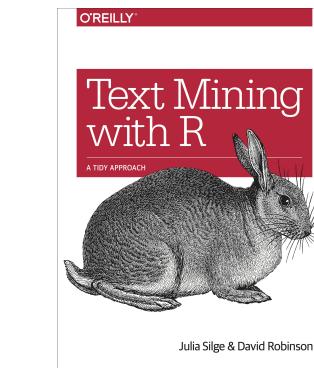
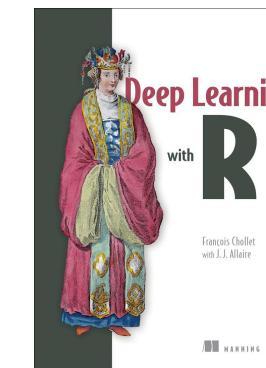
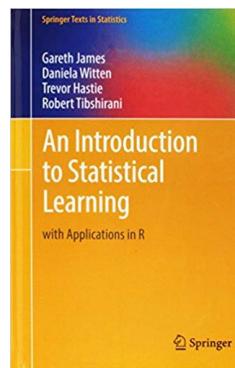
What do you think?

Next steps



Books

Here is a very incomplete series of good books. They are ordered by complexity, beginning with user-friendly books on **learning statistics** in R and ending with books focusing on the more **advanced topics of the R language**.



Websites

The web is a great place to learn about R.

[Google](#) or [Rseek](#), which is a wrapper around google to maximize hits related to R. However, most of the time Google works just fine. Just be sure to add `site:r` to the search query.

[R-bloggers](#) is a website on which R users inform each other on the newest developments. See, e.g., Nathaniel's [entry](#).

[Stackoverflow](#) is a website on which R users exchange problems and solutions to problems. Try post something yourself. You will be amazed by the turnaround.



Support & Consulting



Dr. Dirk Wulff

dirkwulff.org
github.com/dwulff
cstab,
[memnet](#),
[mousetrap](#),
[choicepp](#)



Dr. Nathaniel Phillips

nathanielphillips.com
github.com/ndphillips
yarr,
FFTrees



Markus Steiner

github.com/mdsteiner
ShinyPsych,
EFAres

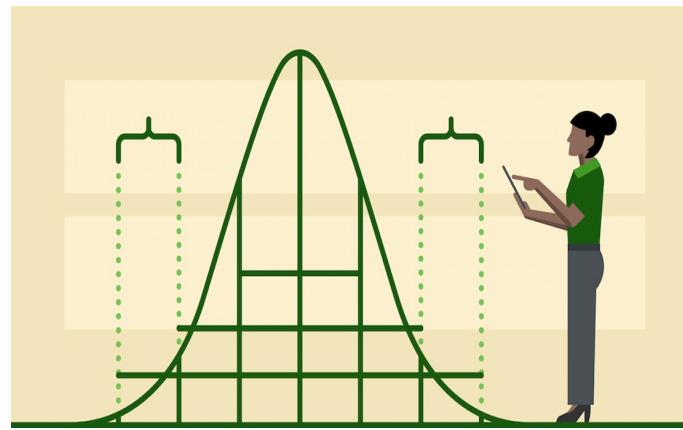
Upcoming courses

Intro to R for Data Science



2 days, Feburary 23/24, 2019

Statistics with R



2 days, April 6/7, 2019

Data Warehousing & Cloud Computing



Fall/Winter 2019

Please give us feedback



“What if we don’t change at all ...
and something magical just happens?”

Basel R Bootcamp - Follow-up questionnaire

Please be so kind to take a few minutes and provide us with feedback for the Applied Machine Learning with R bootcamp in January 2019. In the first part you will have the chance to tell us what you think about the workshop in general. In the second part you can indicate which sessions you liked/disliked and why.

* Erforderlich

How did you hear about the bootcamp? *

- Google / Google Ad
- LinkedIn
- Advanced Studies website
- Friends and colleagues
- Facebook
- Sonstiges: _____

Thank you

Here is an R Joke.

And now one more thing...

20 / 20