

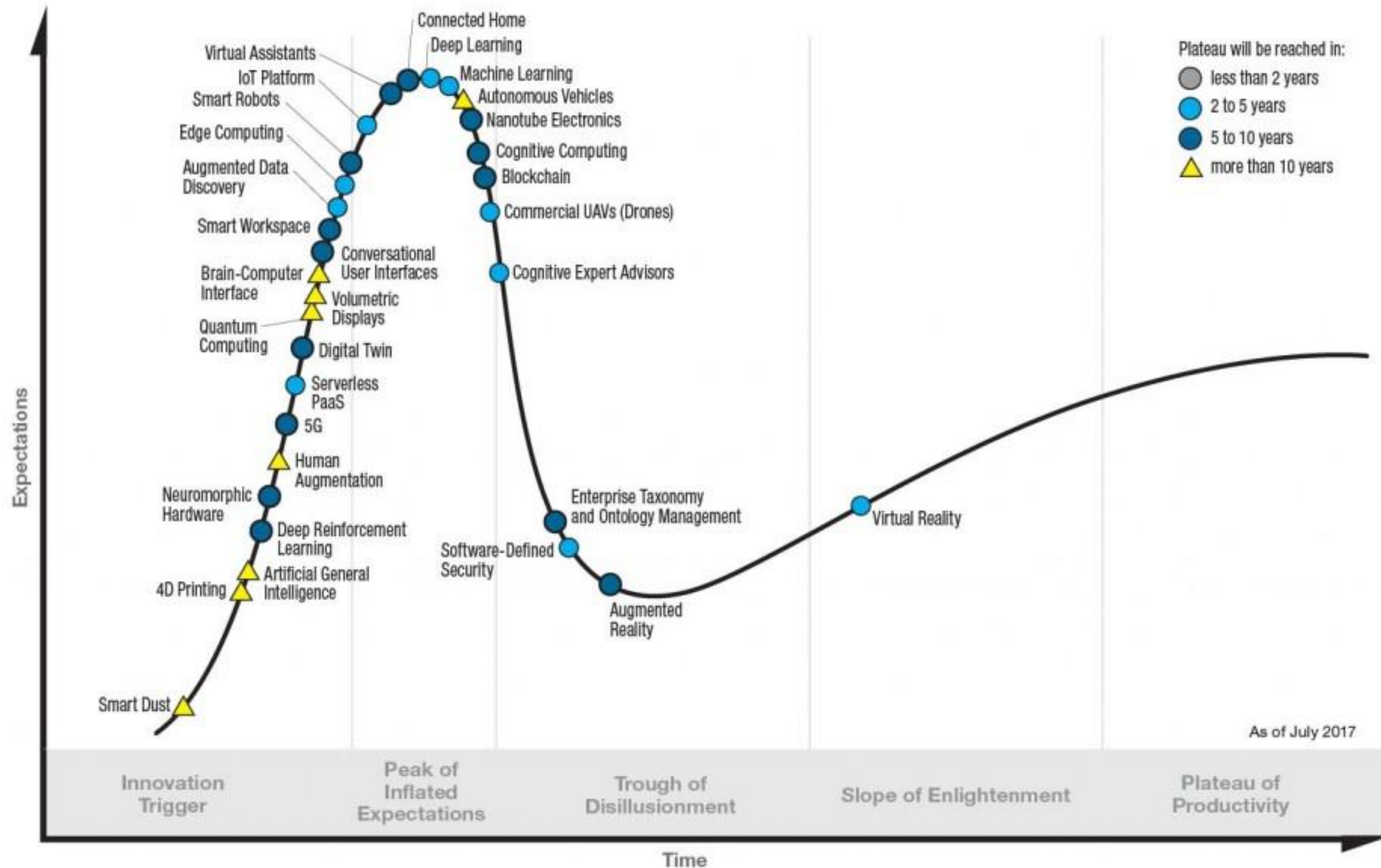
Introduction:

A new approach to ML

@HumanCoders #ML #workshop

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Gartner **Hype Cycle** for Emerging Technologies, 2017





EVERYTHING STARTS WITH A WHY

ALEXANDRE ROBICQUET
ARTIFICIAL INTELLIGENCE RESEARCHER



Y, THE NEW FRAGRANCE FOR MEN
YVES SAINT LAURENT

ysbeauty.com

“Fight fraud with machine learning”


Fraud isn't
always
this obvious.



sift science
Fight fraud with machine learning

Manhattan
Mini Storage
212-STORAGE
www.manhattanmini.com



A still from a television show featuring two men in a kitchen. The man on the left, with dark hair and a serious expression, wears a dark navy blue zip-up sweater over a light-colored checkered shirt. The man on the right, also with dark hair, wears a teal t-shirt with white horizontal stripes and looks towards the left with a concerned expression. The background shows a kitchen with white cabinets, a window with a decorative patterned blind, and a refrigerator with a calendar or notes on it.

Jian-Yang's actually put together
a pretty good classifier.



Chocolate Mousse

44%

Cals
355

Fat
25

Carb
27

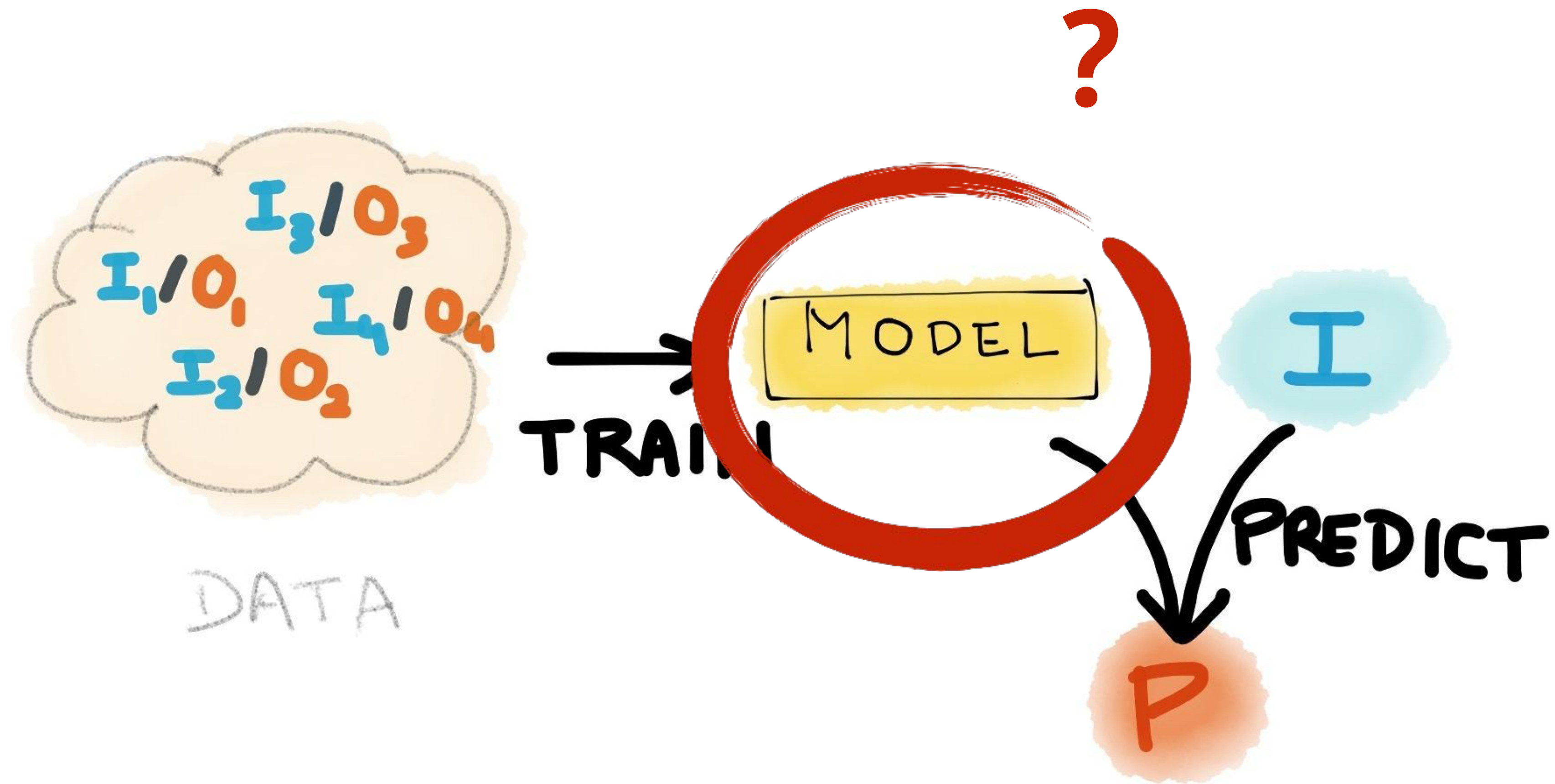
Prot
7

Per 1 cup



last column = output (by convention)

Bedrooms	Bathrooms	Surface (foot²)	Year built	Type	Price (\$)
3	1	860	1950	house	565,000
3	1	1012	1951	house	
2	1.5	968	1976	townhouse	447,000
4		1315	1950	house	648,000
3	2	1599	1964	house	
3	2	987	1951	townhouse	790,000
1	1	530	2007	condo	122,000
4	2	1574	1964	house	835,000
4			2001	house	855,000
3	2.5	1472	2005	house	
4	3.5	1714	2005	townhouse	
2	2	1113	1999	condo	
1		769	1999	condo	315,000



ML and AI are everywhere

Amazon for David Jones (@d_jones, see [source](#))



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Explore Your Prime Membership

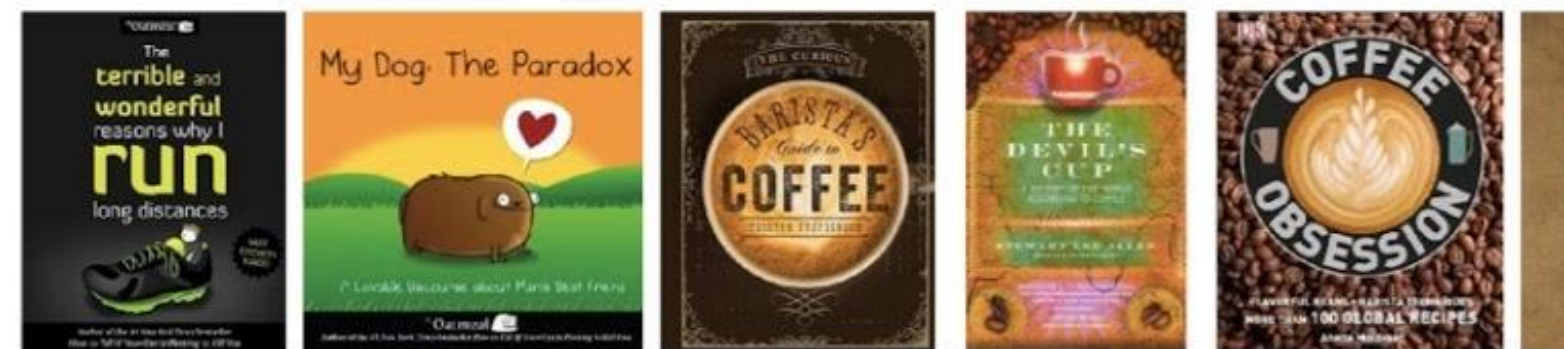


Spring Cleaning
Leave winter
in the dust

Recommendations for You in Electronics



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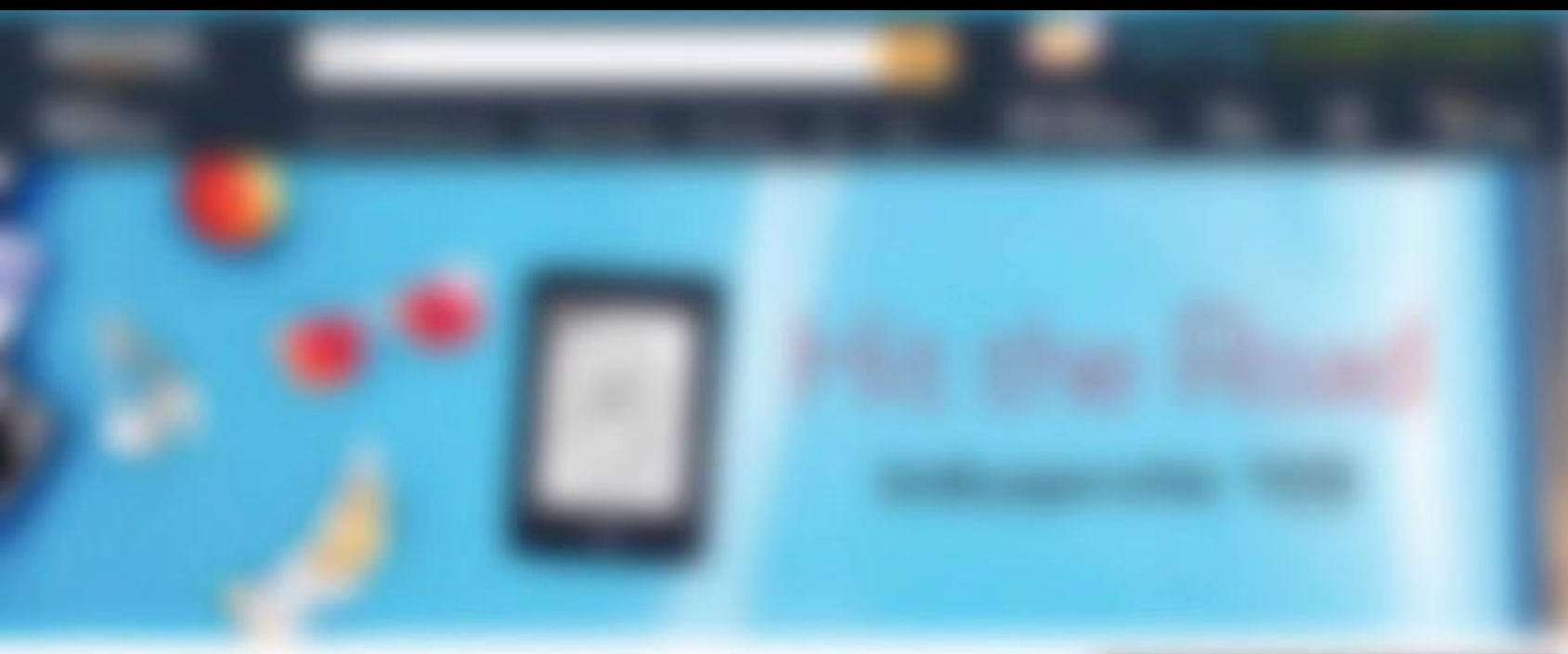
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Amazon for David Jones (@d_jones, see [source](#))



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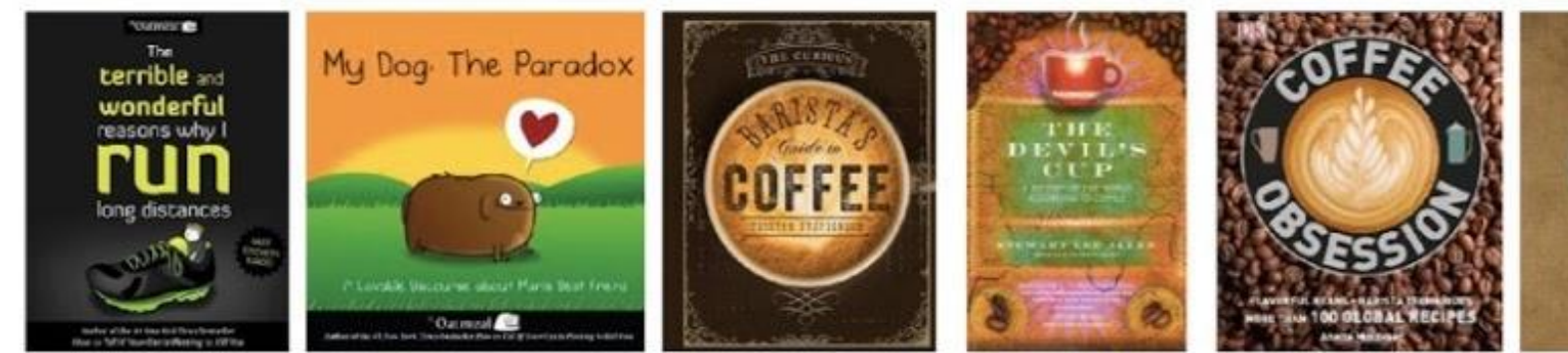
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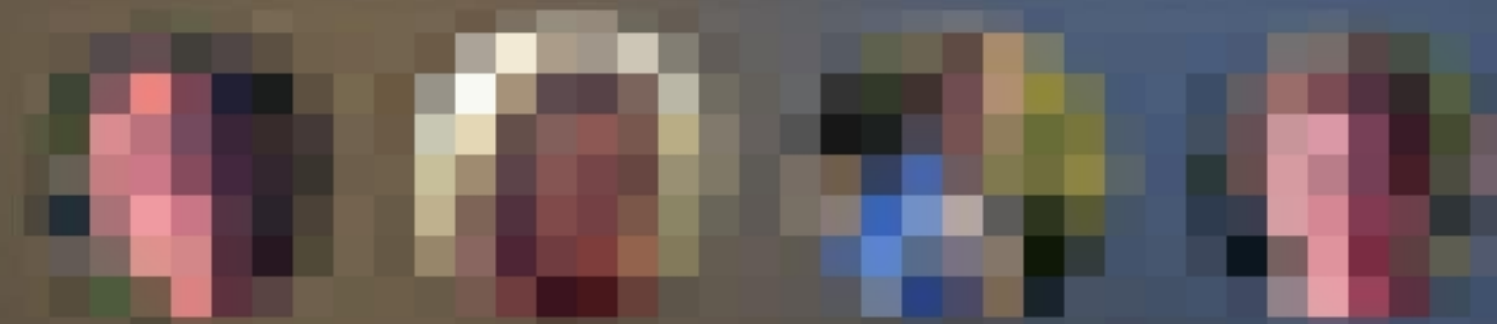


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SIRI SUGGESTIONS

Show More



Richard

Adeline

Camille

Anne



Skype



Messenger



Hopper



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Lunch



Coffee



Shopping



Petrol

NEWS


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Cristiano Ronaldo à Blanc :
«J'aimerais beaucoup travailler a...

C'est l'histoire d'un joueur qui veut
quitter le Real Madrid. Et depuis mardi

Orange F






Aprende a h


0:06

056 - Ap

Español

1x





MASTER OF NONE SEASON 2

SHUFFLE PLAY

Più di te (I Won't Tell)

Mina • Studio Uno

Tema - From "Ladri di biciclette"

Alessandro Cicognini • Tema (From "Ladri di biciclet

E' facile

Ennio Morricone • L'assoluto naturale (Expanded Edi

Free

P.E. Hewitt Jazz Ensemble • Jawbones

Mesa verde - Version 3

Ennio Morricone • Giu' la testa

Dolce Vita


Ryan Paris • ZYX Italo Disco Collection


L'assoluto naturale


Ennio Morricone • L'assoluto naturale


Hey Hey Guy


Ken Laszlo • ZYX Italo Disco Collection


 Bite the Apple • Rainbow Team


 Devices Available

 Home

 Browse

 Search

 Radio



Get Directions to "1 Shortland...ted Kingdom" in Google Maps
Recently viewed in Safari



PAR – BUE
Jun 1 – Jun 17



You should keep watching this trip.

You will be notified when deals are available or prices start to rise.



Watching

Price Prediction



Today until Apr 7

Prices will vary over the next 4 months, dropping as low as **671 €** (savings of **70 €**).



Apr 8 – May 26

Prices will probably rise about **86 €** after April 8.



May 27 – Jun 1

Prices are expected to climb at least **438 €** after May 27.



Dates



Prediction



Tips



Flights

Search

➤



•
•
•

×

Greg to bml-ebook ↻

Oct 28 :

Hi, Louis.

Please forward the download url to your electronic book's edition & additional code samples referenced within the Amazon.com product detail page.

Thank you very much.

Greg Newman
gnwmn@yahoo.com



What do developers *actually* need to
know about Machine Learning?

Which algorithms do you need to know?

- Do we Need Hundreds of Classifiers to Solve Real World Classification Problems?
- **Random forests** most likely to perform best
- Based on **decision trees**
- Implemented in all ML tools

How much do you need to know?

- Intuitions — what makes learning possible?
- High-level understanding of learning algorithm
- Main parameters
- Possibilities and limitations

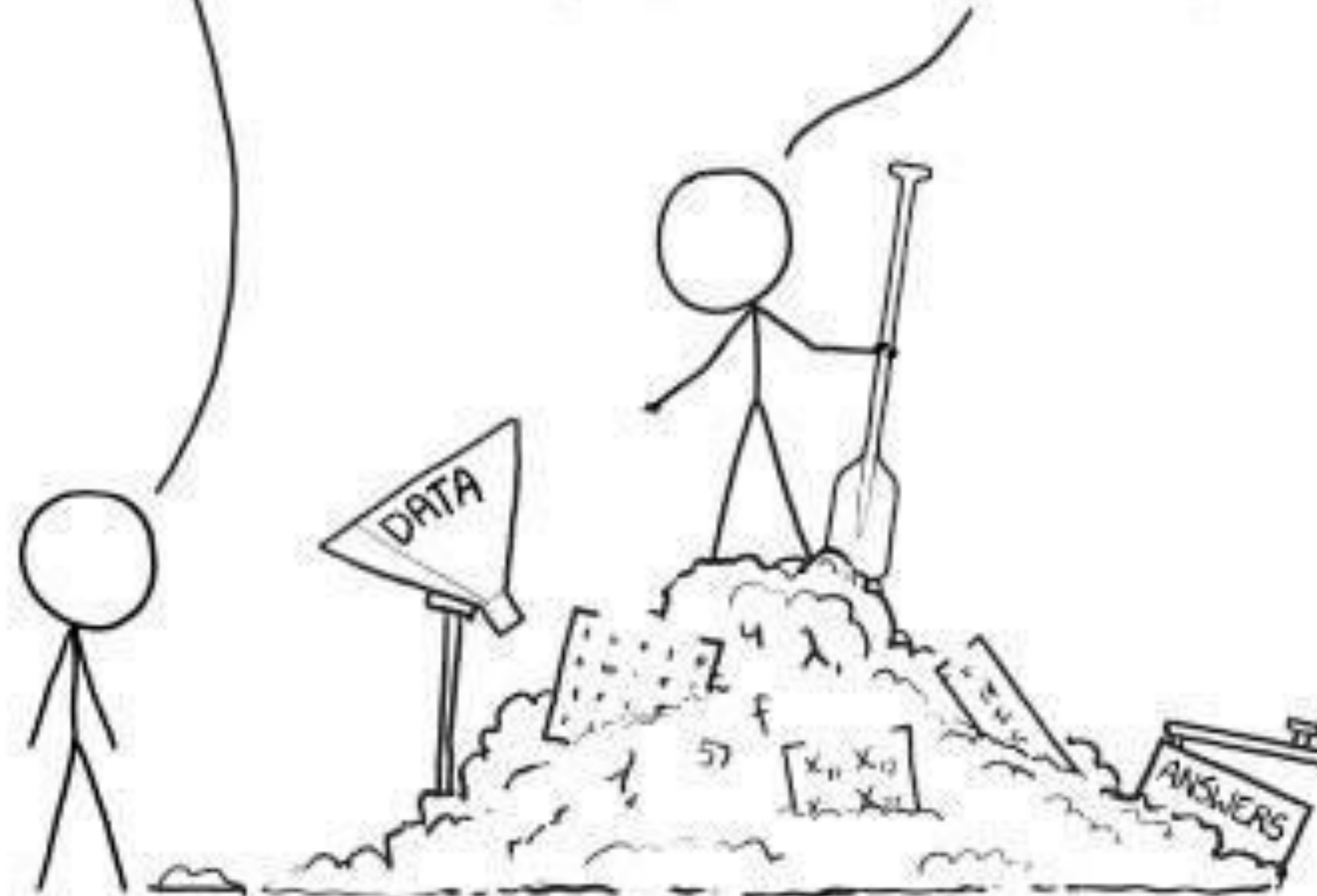
THIS IS YOUR MACHINE LEARNING SYSTEM?

YUP! YOU POUR THE DATA INTO THIS BIG
PILE OF **DECISION TREES**, THEN COLLECT
THE ANSWERS ON THE OTHER SIDE.

WHAT IF THE **ANSWERS ARE WRONG?**

how do we quantify that?

JUST STIR THE PILE UNTIL
THEY START LOOKING RIGHT.



Model evaluation

Credit

ANALYSES

Settings

Help

Alerts

Search

Analyze kaggle_give_me_credit_nomissing

SummaryScriptChartsModels

ACTIONS

Predict SeriousDlqin2yrs (Binary classification)

TRAIN

LISTTABLE

Settings

<input type="checkbox"/>	✓	Name	Trained	Accuracy	Precision	Recall	F1 Score	Cost Matrix Gain	Log Loss	ROC AUC	Lift	★
<input type="checkbox"/>	✓	XGBoost	2017-04-21 08:39:10	0.91	0.36	0.44	0.40	0.01	0.20	0.82	2.05	★
<input type="checkbox"/>	✓	Random Forest with 144 trees	2017-04-21 06:09:16	0.58	0.13	0.90	0.22	-0.06	0.39	0.84	2.15	★
<input type="checkbox"/>	✓	Logistic Regression	2017-04-21 06:09:16	0.93	0.41	0.21	0.27	0.01	0.23	0.69	1.64	★