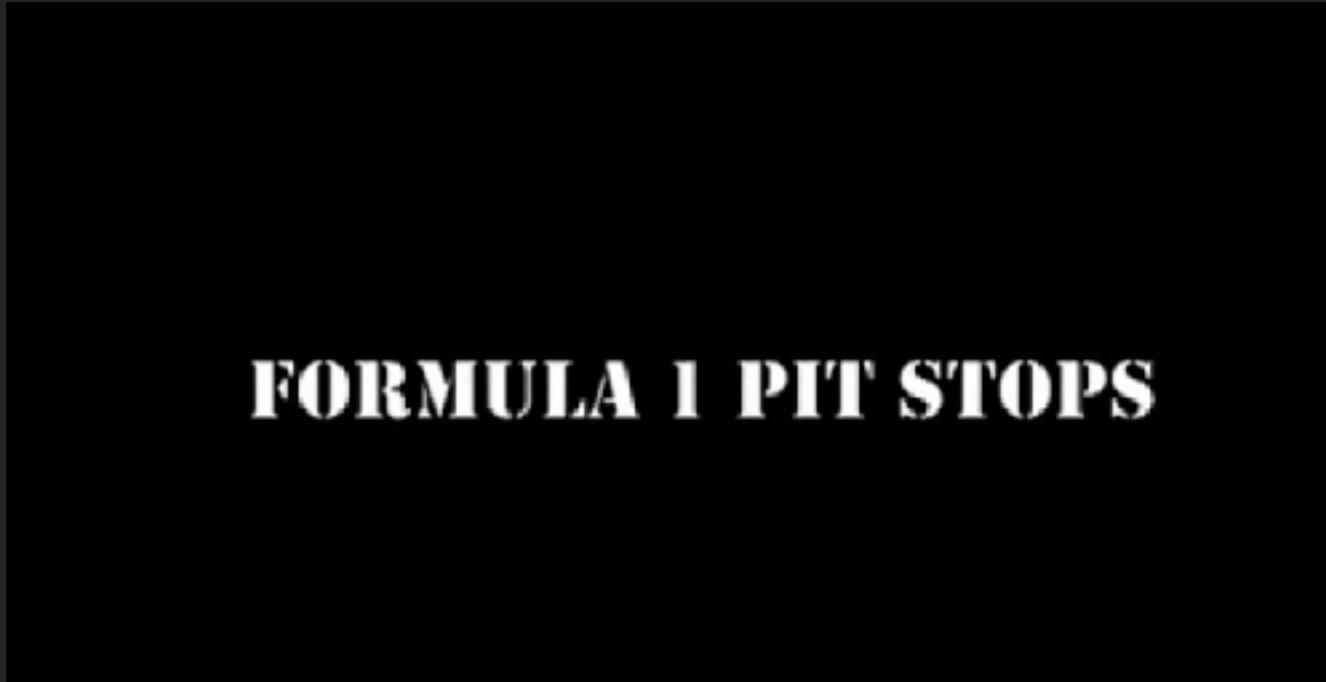


Democratizing Intelligence

Sri Ambati, maker
@srisatish @h2oai

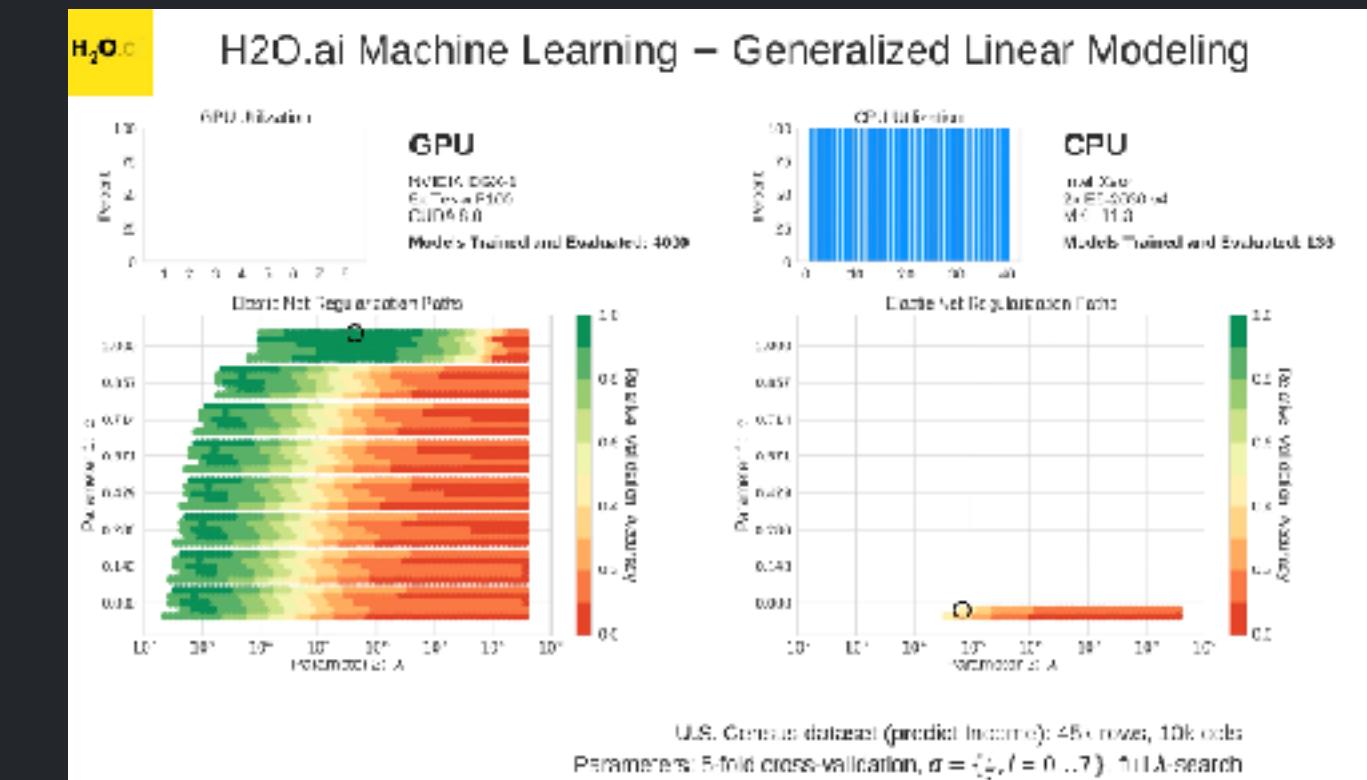
Then and Now...

Pit Stops, 1960 to 2013



<https://www.youtube.com/watch?v=LOJbM0aXZp0>

World's Fastest GPU
Machine Learning in H2O

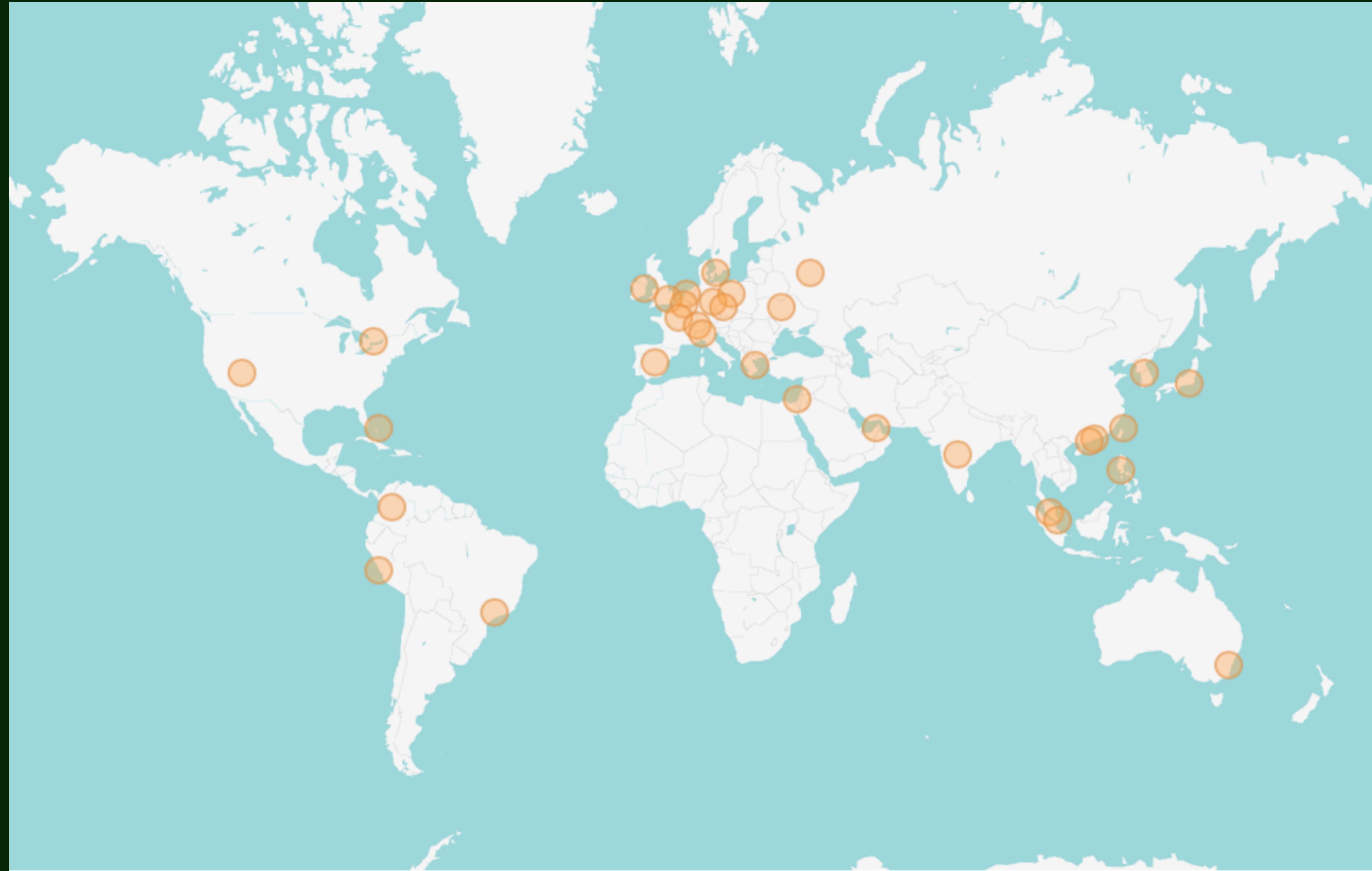


<https://www.youtube.com/watch?v=LrC3mBNG7WU>

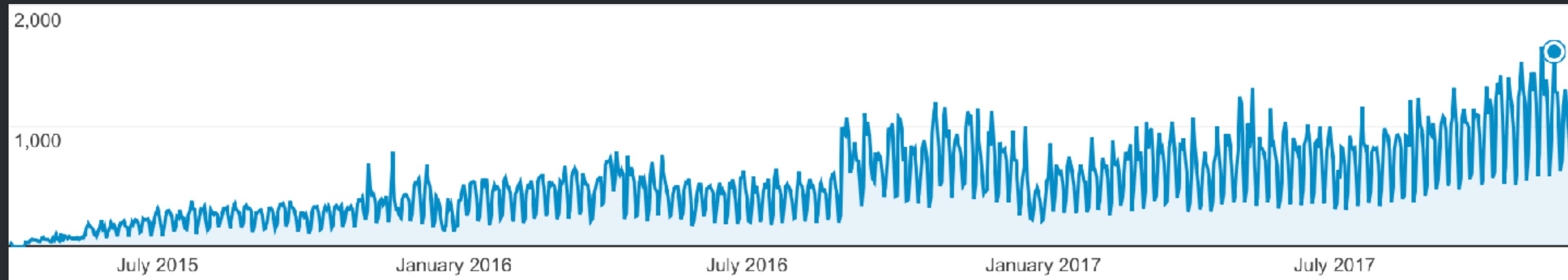
Time is the only non-renewable resource!

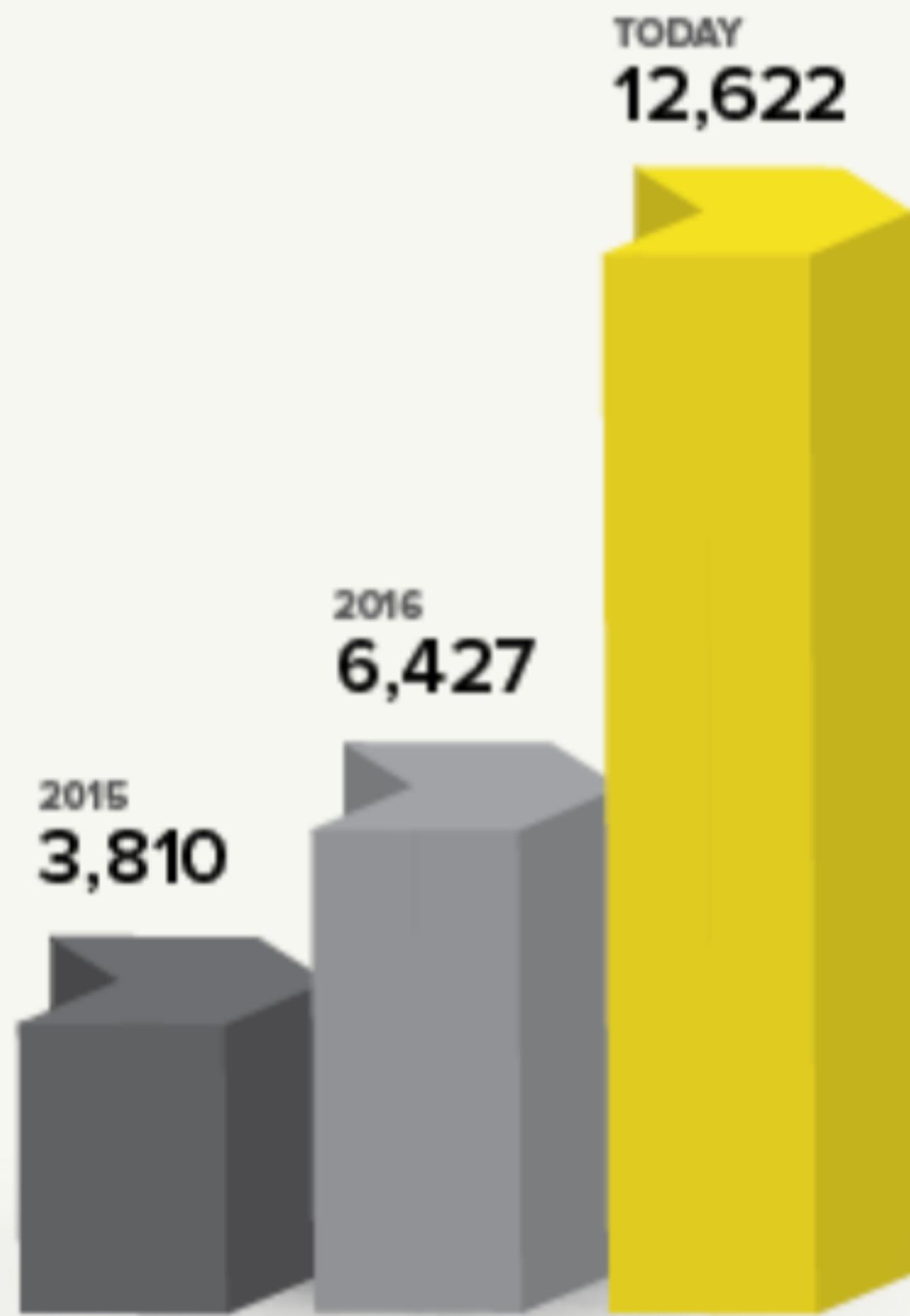
Welcome to
#h2oworld

Record Attendance - 700 in person, 500 livestream



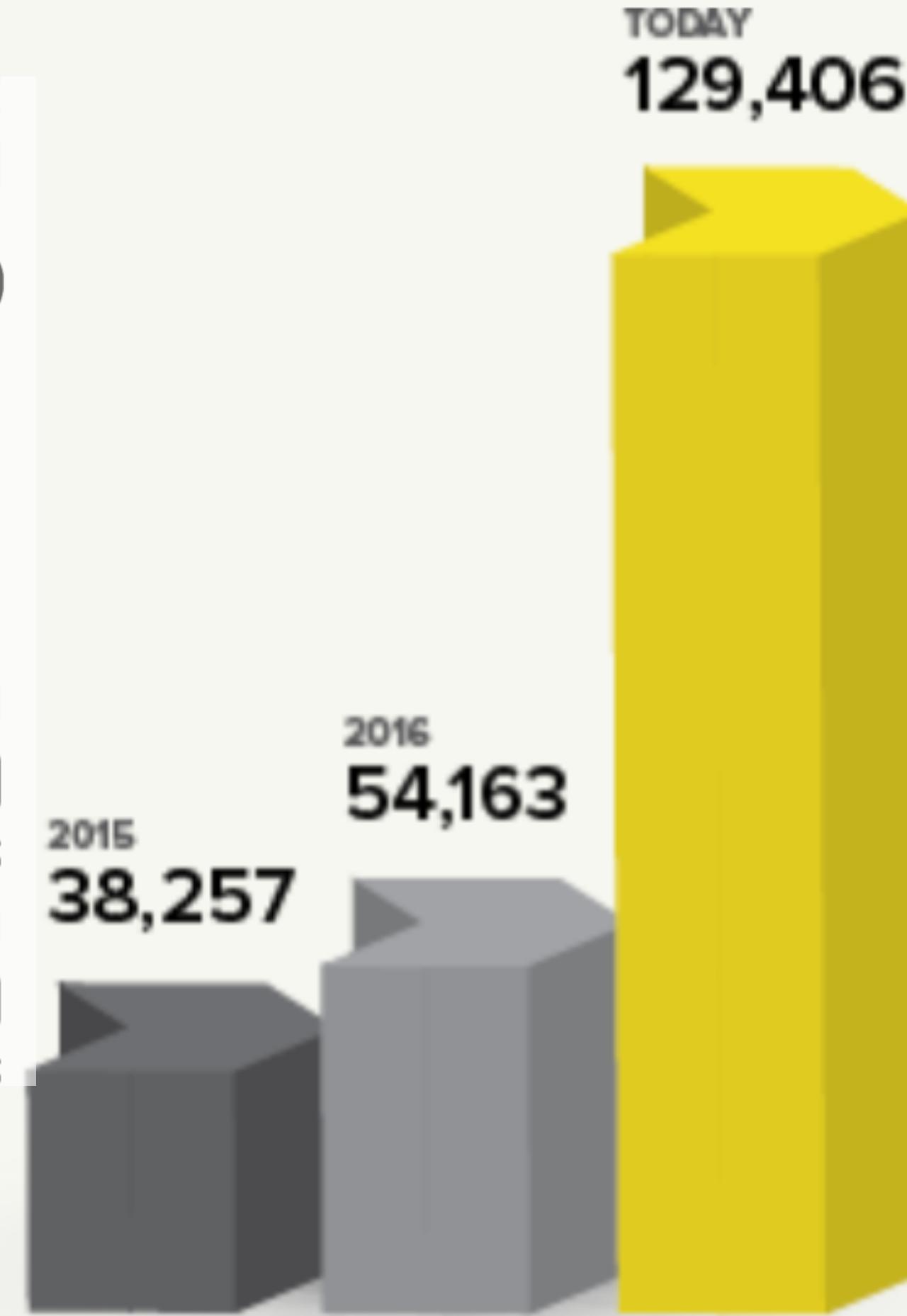
H2O Open Source adoption all time high!





Companies using H2O.ai

222 FORTUNE
OF THE 500
H₂O
8 OF TOP 10
BANKS
7 OF TOP 10
INSURANCE COMPANIES
4 OF TOP 10
HEALTHCARE COMPANIES



H2O.ai Users

Open source is defense of **Community** with Code

Open source is defense of **Community with product**

**It's pull not push.
PR means Pull Request.**

Freedom not free.

make software, not just consume it!

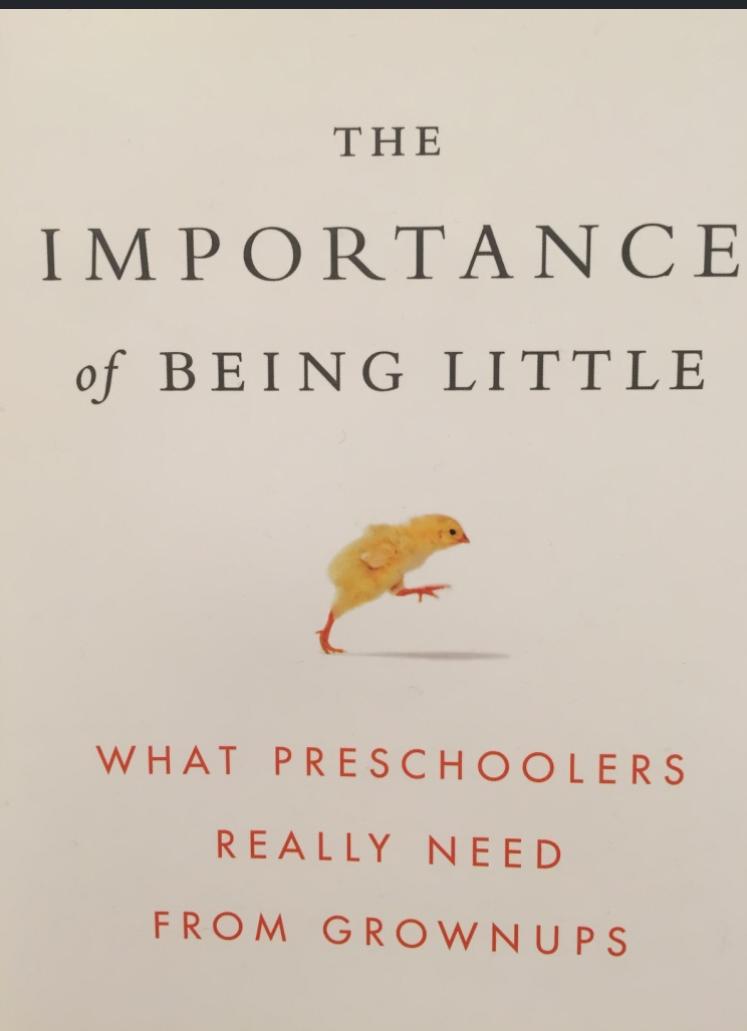
**Nurture Community Love
with beautiful data products**

Our commitment to Open Source
is
// Double

h2o-3, autoML
Sparkling Water
h2o4GPU,
data.table, R & Python

Our commitment to Open Source
is // Double

h2o-3, autoML
Sparkling Water
h2o4GPU,
data.table, R & Python
keras (for deep water)



make platforms not just products!
ecosystems grow by giving.

Raise a forest, not just a tree!

Our partnerships with
NVIDIA
IBM Power

AWS, Azure, Google 
Splunk
Hadoop Distributions
Data Science Workbenches
Scoring Deployments

Data Companies
Customers

team
community
& customers

Thank You.
Speakers, Listeners.
Makers.

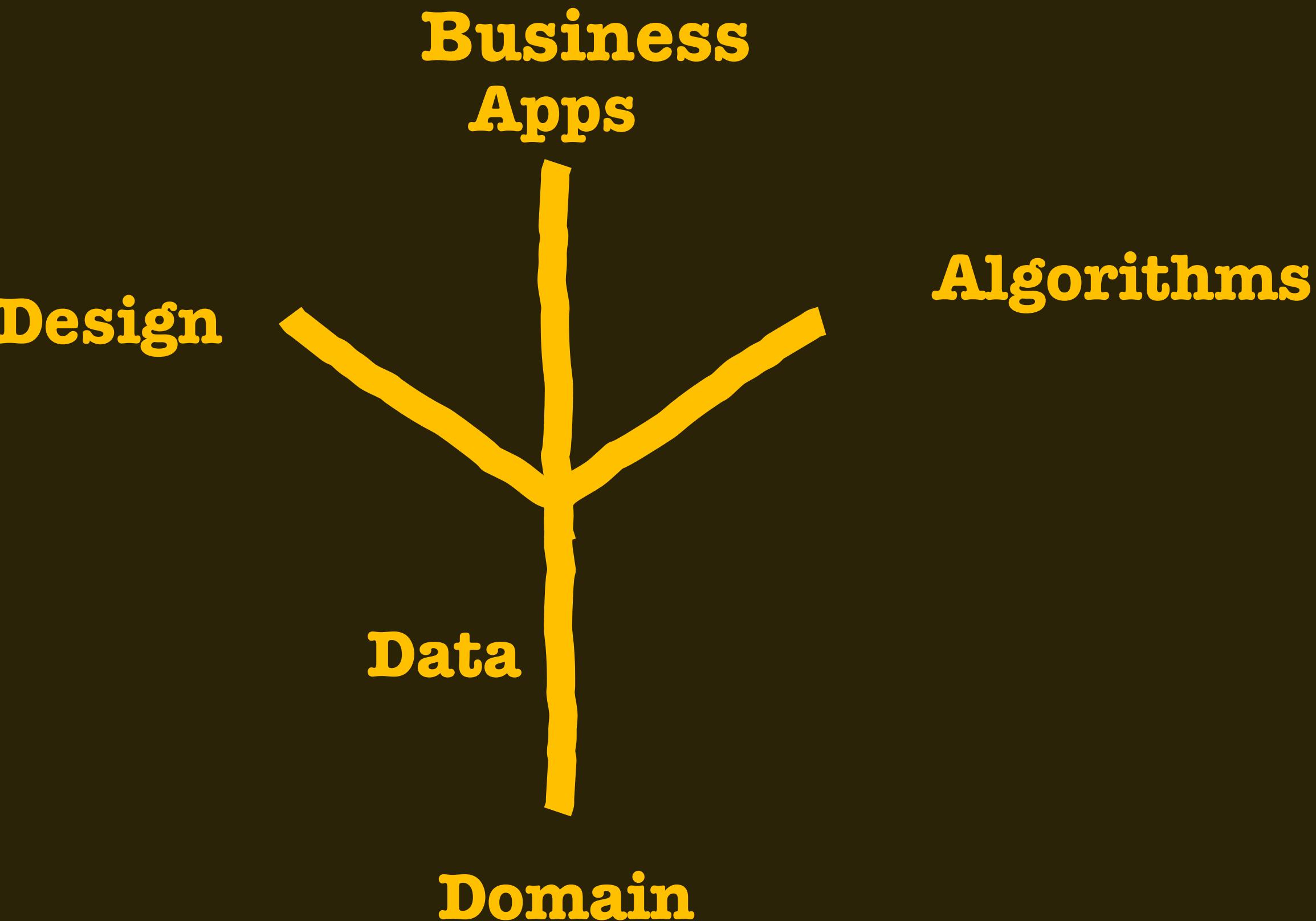


Gratitude

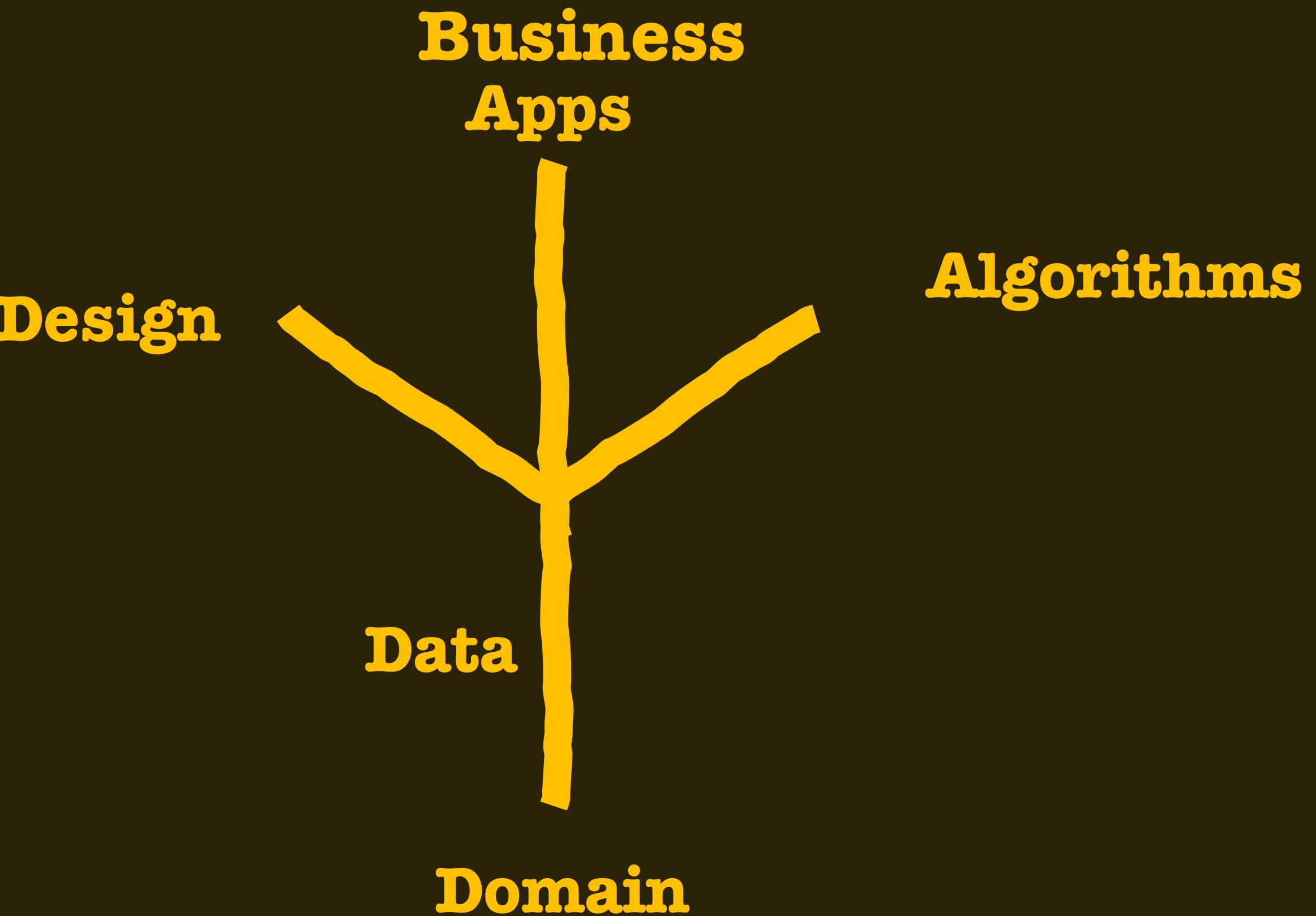


Oliver Sacks

**Data
is a
Team
Sport!**

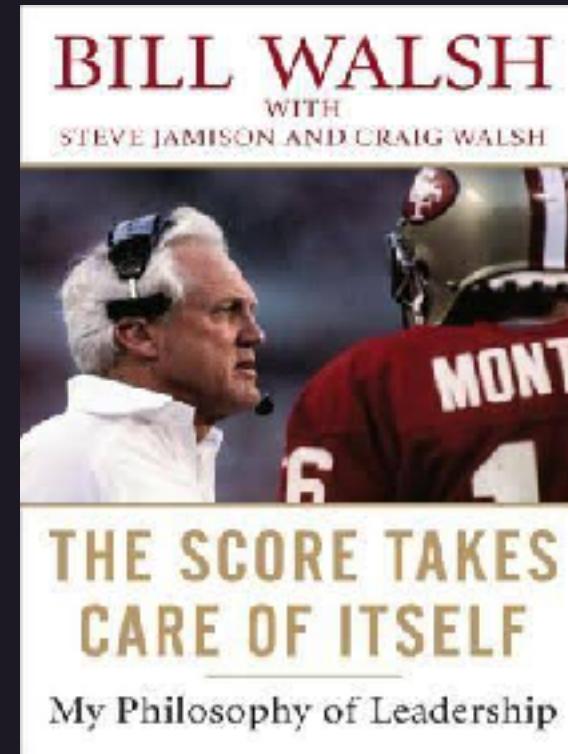
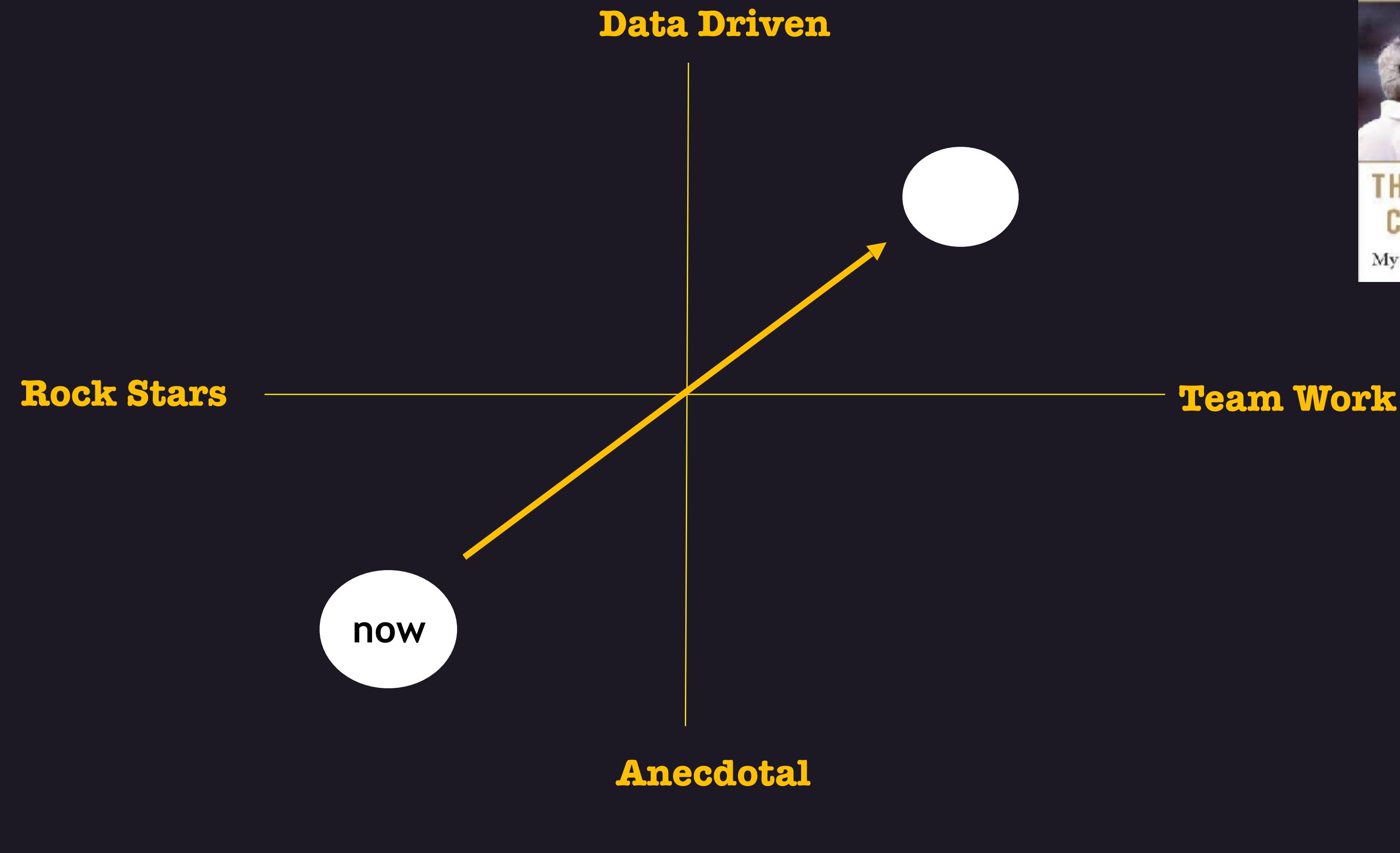


**Data
is a
Team
Sport!**



AI Adoption is a people problem

How do we incentivize Team Sport?



H₂O

...Grandmasters, Algorithm Engineers, Software
hackers, Physicists, Math, Quants, Vertical Data
Scientists, Visualization, UX, Python, R...

Community Managers
Sales, Marketing, Partnering, Business

<https://www.h2o.ai/about/>

CA, US, Prague, London, Germany, Toronto, Tokyo

THE H₂O.ai TEAM



culture is your co-founder

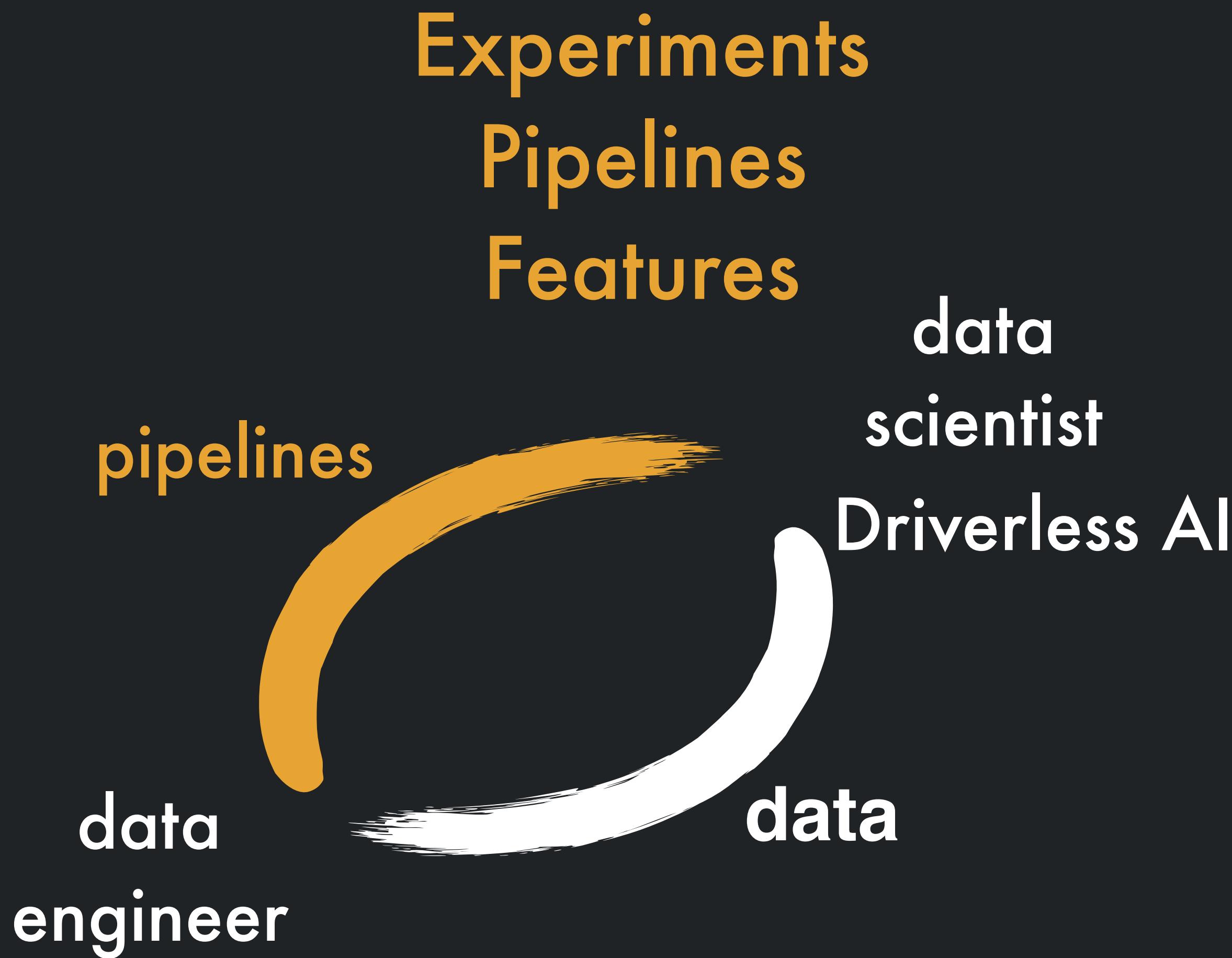
startups are team sports!

TOM SIMONITE BUSINESS 10.28.17 07:00 AM

SOLVE THESE TOUGH DATA PROBLEMS AND WATCH JOB OFFERS ROLL IN



KPIs for a Data Lake



**Experiment faster + cheaper
reproducible and accurate**

Learning rate of the
organization

Automation is key to industrial strength AI

Automation is key to industrial strength AI

Automatic Feature Engineering.
Prevention of common pitfalls - time killers
Overfitting, Leakage.
Reporting and Visualization
Consistency breeds Speed and Safety.

Specialized AI, not just Generalized AI

Specialized AI, not just Generalized AI

**Vertical Recipes
Reduce cost of Underwriting, Radiology..
With AI.**

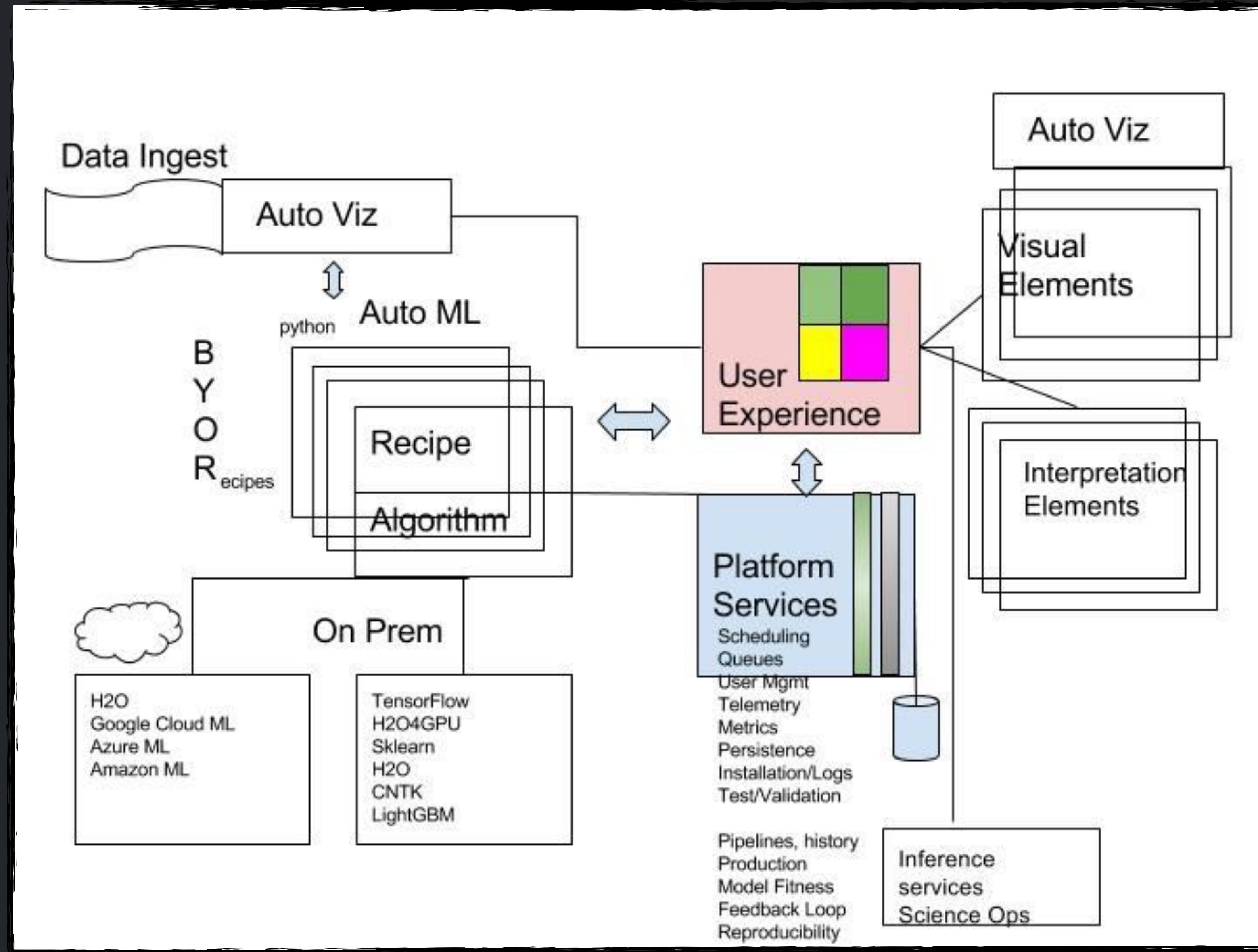
**Value shifted to asset-light
interaction-rich platforms**

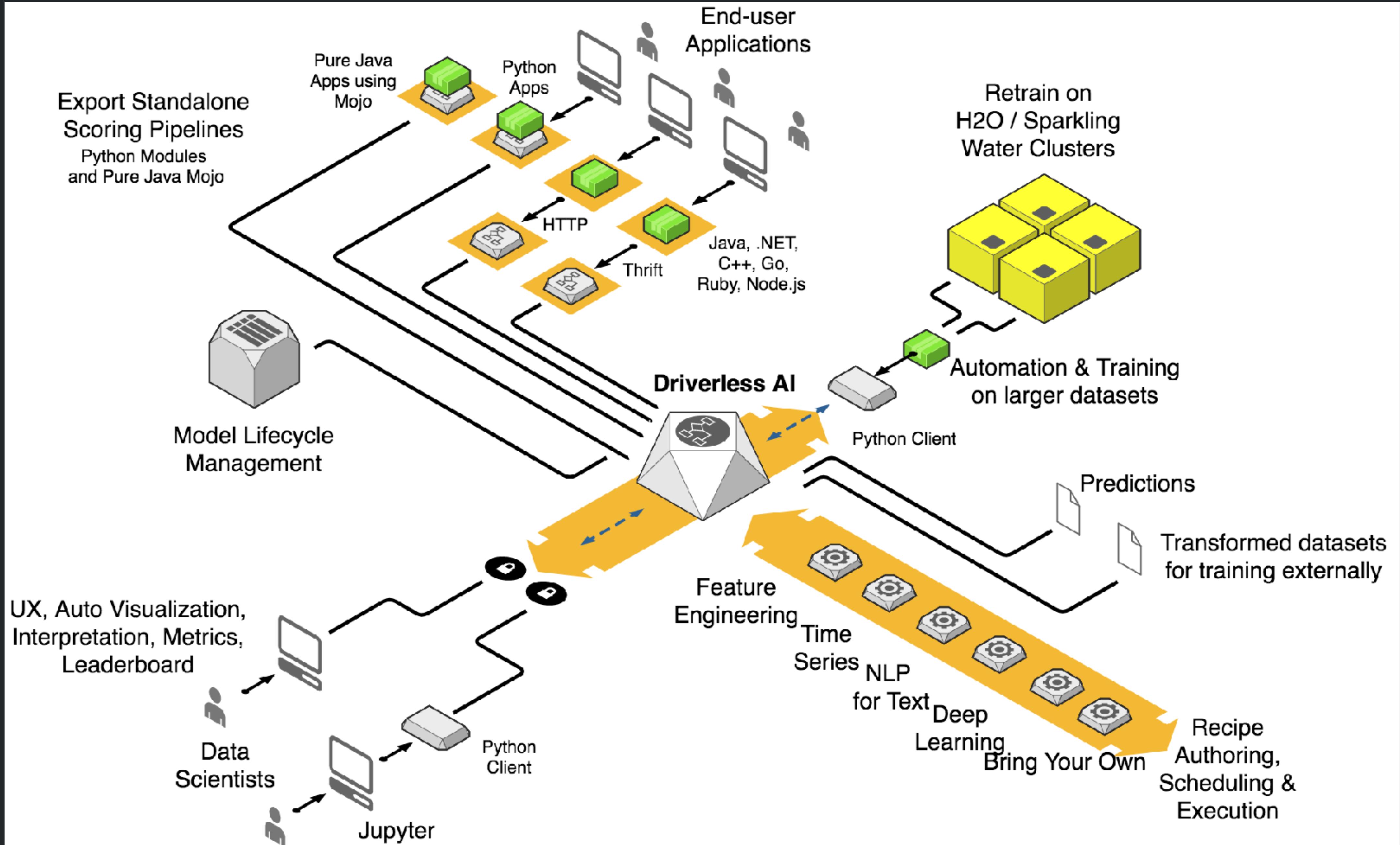
Microservices, not monolithic applications!

Credit Scoring, Lending
AML, KYC, Personalized
Employment, Income Verification
Payroll, Controllers, Accountants..

Enterprises **reinventing** as micro businesses!

Driverless AI: whiteboard vision





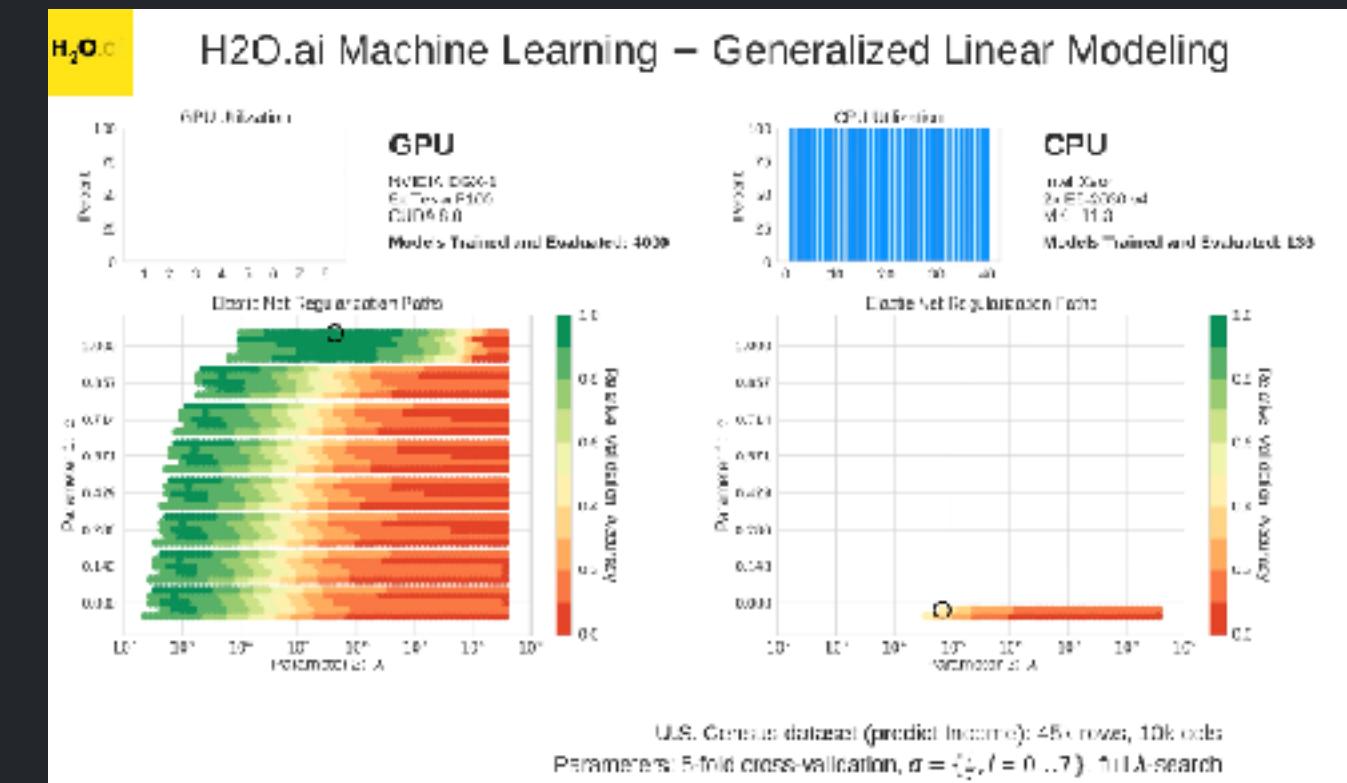
Then and Now...

Pit Stops, 1960 to 2013



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World's Fastest GPU Machine Learning in H2O



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Time is the only non-renewable resource!

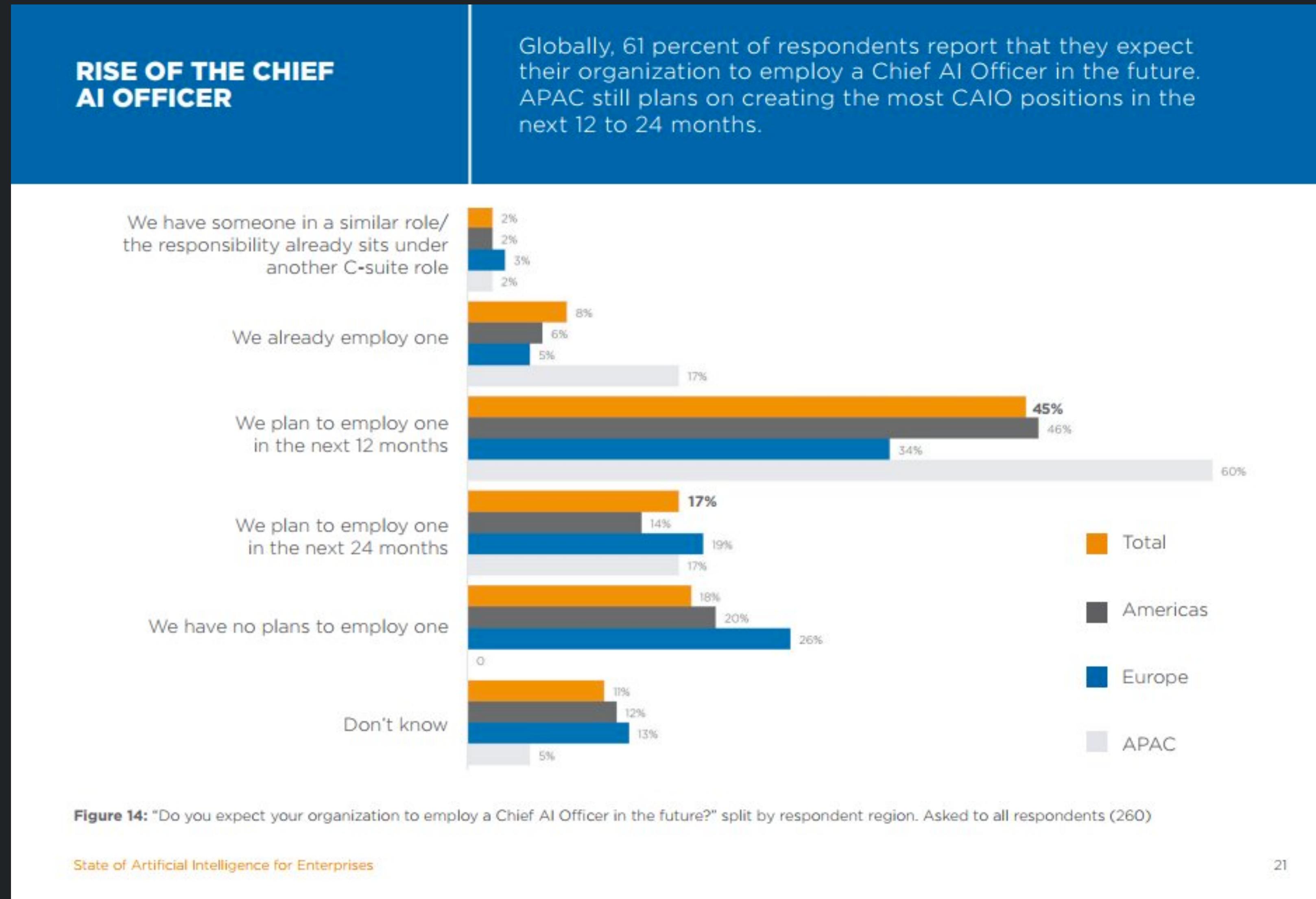
CASH



DATA

Data monetization through
Business Process Change

What is your AI Strategy



anatomy of a data product



Deep Learning

AutoML

Shift focus from internal to external interactions!
From Rule-based to Pattern Recognition!

a data product

⤳ You Retweeted

 PwC ✅ @PwC · Oct 4

Exciting night at this year's @WAI_News Awards: PwC wins 2017 Audit Innovation of the Year! pwc.to/Glai17 #taandiab17



Category	Description	Value
Revenue	603,464.744.00	70.7%
Expenses	70,744.744.00	16.6%
Assets	5,144.744.00	5.1%
Liabilities	30,352,544.00	2.9%
Equity	30,352,544.00	1.7%
Other	0.0%	0.2%

Trust in AI



Automatic Visualization

Visual Intelligence

Starts where data science ends

Data Scientist = 100% data

Business Unit = 85% data, 15% storytelling

Executive = 15% data, 85% storytelling

Board = 99% storytelling

GrandPa = 100% storytelling

Data Journalism

Building Trust in AI

Intelligent Machines

The Financial World Wants to Open AI's Black Boxes

Some of the most powerful machine-learning techniques work in mysterious ways, which is a problem if you need to explain a decision to customers.

\$1.95

William
Strunk Jr.
and
E.B. **White**

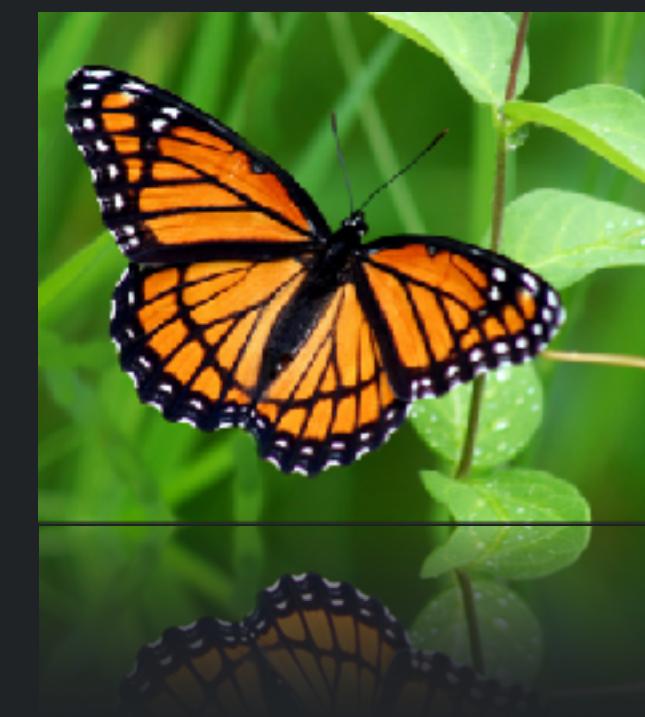
"Buy it, study it, enjoy it. It's as timeless
as a book can be in our age of volatility."
—*The New York Times*

The
Elements
of
Style

Third Edition

Time is the only non-renewable resource!

Transformation



caterpillar to butterfly

engineer to founder

manager to leader

child to grandpa



3 Things to learn from a Child

Always be Happy
Never be Idle
Cry for what you want.



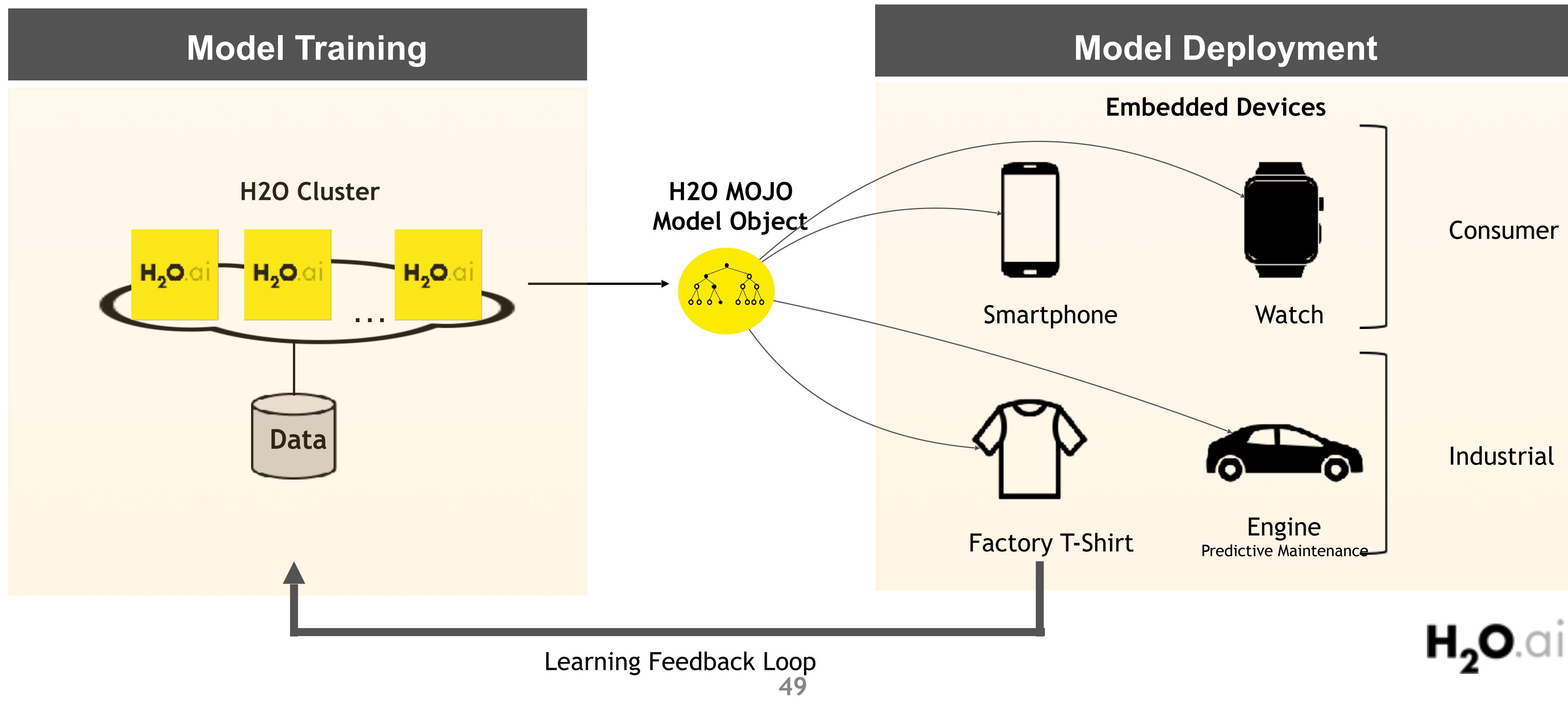
**Second Products of a Company
needs
Beginners Eyes.**

**A child's curiosity, playful
fearlessness**

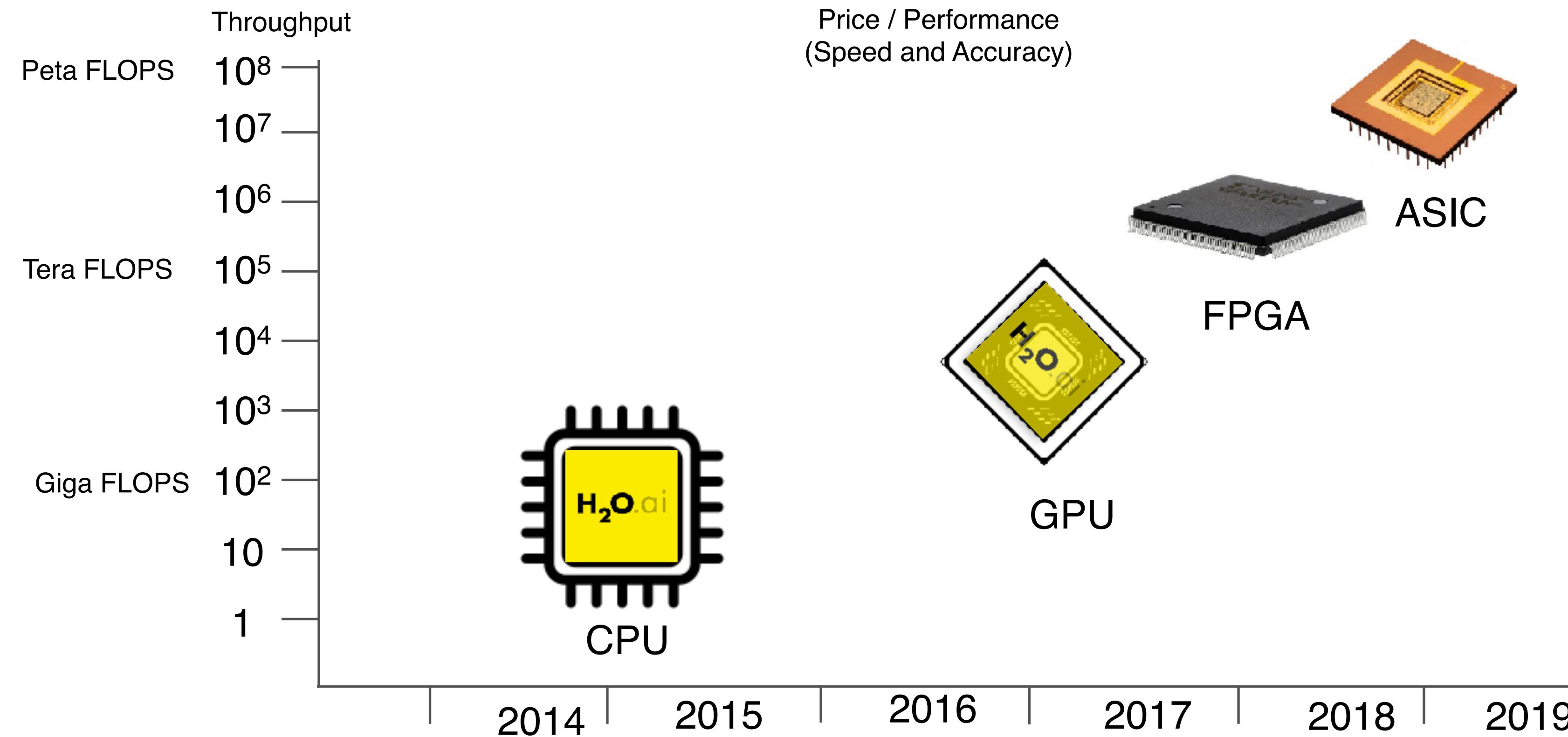
**code is changing the world!
code is a commodity.**

data + ai = dataware
the new software/hardware

The Edge



AI is Eating Hardware

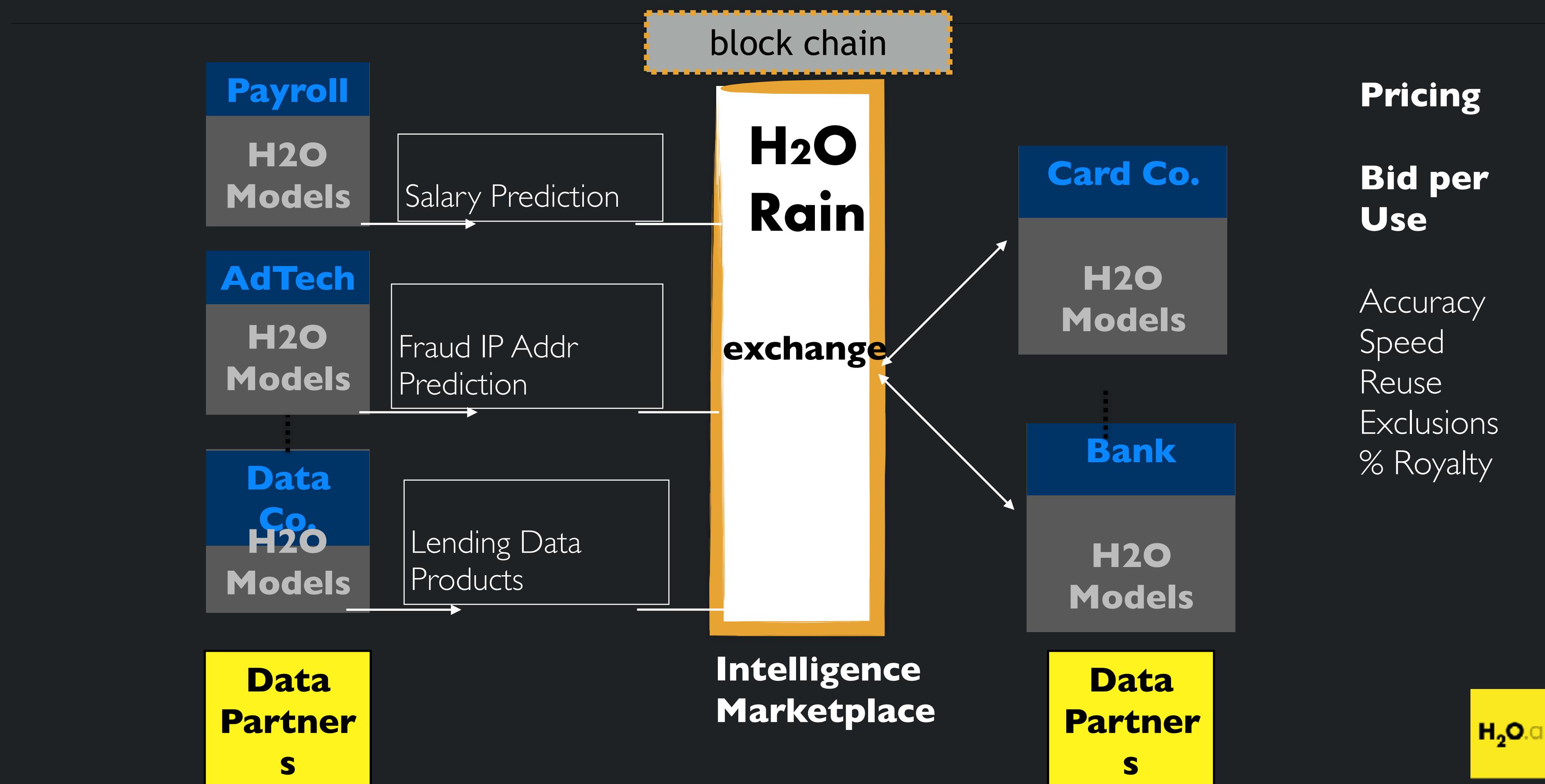


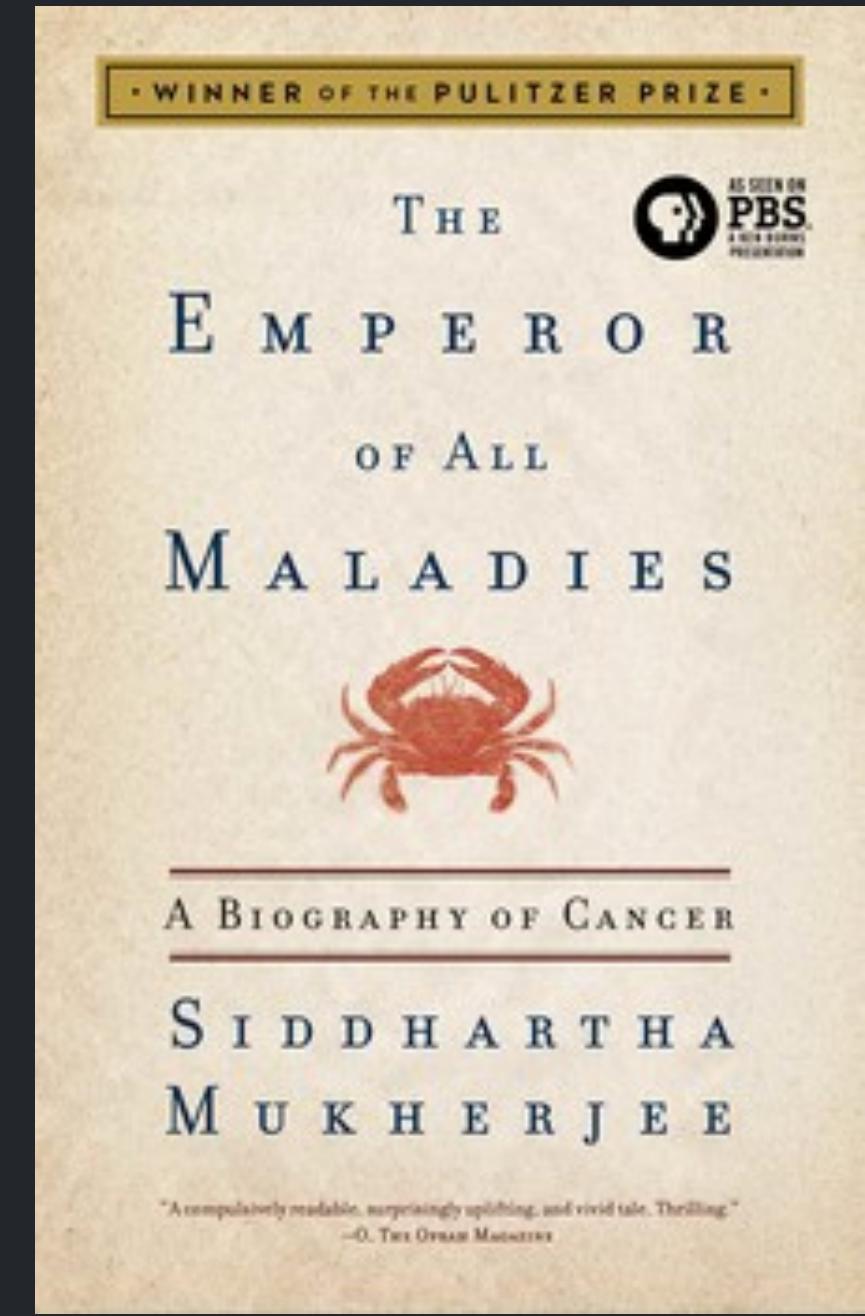
Open Source AI ✓
Open Data Ecosystems

Data Products need Data Alliances

Data Monetization with AI exchanges

Rain





**Every generation needs to fight its
revolution!**

Proceedings of the National Academy of Sciences of the United States of America

CURRENT ISSUE // ARCHIVE // NEWS & MULTIMEDIA // AUTHORS // ABOUT // COLLECTED ARTICLES // BROWSE BY TOPIC

Home > Current Issue > vol. 113 no. 28 > Anders Eklund, 7900–7905, doi: 10.1073/pnas.1602413113

 CrossMark
click for updates

Cluster failure: Why fMRI inferences for spatial extent have inflated false-positive rates

Anders Eklund^{a,b,c,1}, Thomas E. Nichols^{d,e}, and Hans Knutsson^{a,c}

Author Affiliations

Edited by Emery N. Brown, Massachusetts General Hospital, Boston, MA, and approved May 17, 2016 (received for review February 12, 2016)

Abstract Full Text Authors & Info Figures SI Metrics Related Content PDF PDF + SI

Significance

Functional MRI (fMRI) is 25 years old, yet surprisingly its most common statistical methods have not been validated using real data. Here, we used resting-state fMRI data from 499 healthy controls to conduct 3 million task group analyses. Using this null data with different experimental designs, we estimate the incidence of significant results. In theory, we should find 5% false positives (for a significance threshold of 5%), but instead we found that the most common software packages for fMRI analysis (SPM, FSL, AFNI) can result in false-positive rates of up to 70%. These results question the validity of some 40,000 fMRI studies and may have a large impact on the interpretation of neuroimaging results.

40,000 fmri studies invalidated due to a bug.

Open Source and Open Data is the path!

**Open Data Ecosystems.
Open Source Diagnostics Software.
Open Source Algorithms to fight Disease.**

**Data Products Save Lives!
Consumers integrate verticals.**

Life cycle of Data

data to insight
insight to story
story to wisdom

Life cycle of Data

data to insight
insight to story
story to wisdom

data transforms processes.

data science is the pursuit of truth

*Universe is sparse. Life is messy.
Data is sparse and messy.
- Lao Tsu*

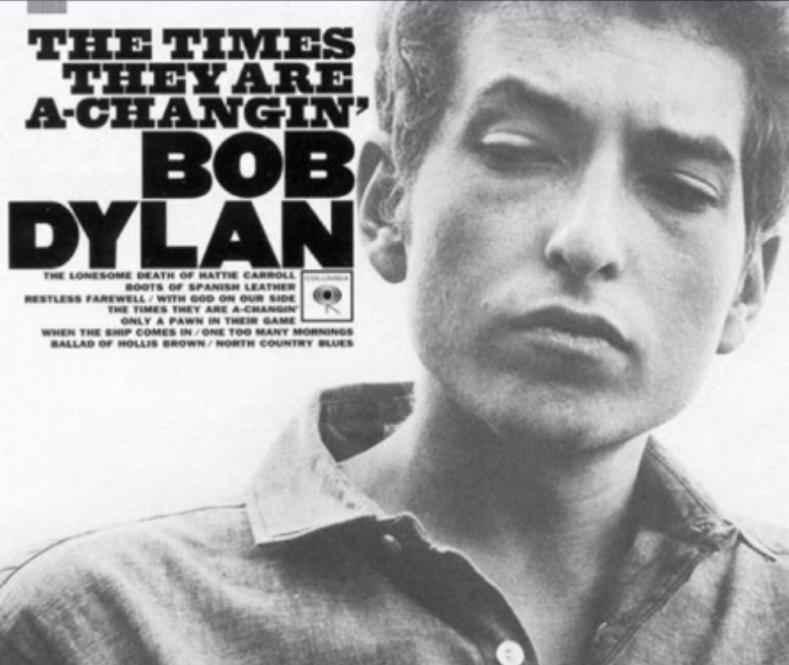
ai + data + people =
transformation

Value from
improving processes

transformation
data + ai

Combinatorial Innovation in AI is ahead!

still early days in the ai continent.
hype is a real problem.



Come gather round people
Admit the h₂o around you has grown.

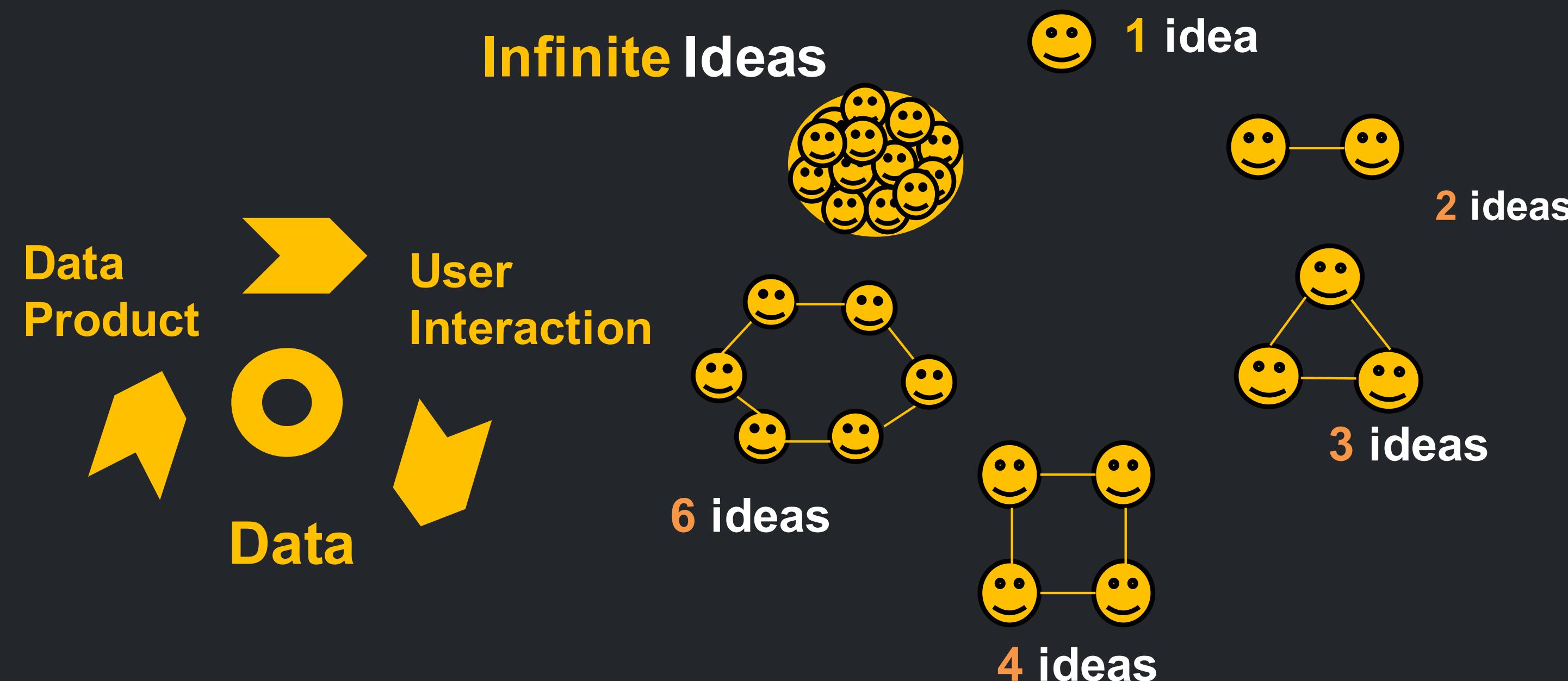
first one now will later be last..



data science is the search for truth

Optimize for Scale.

Power law of Networks

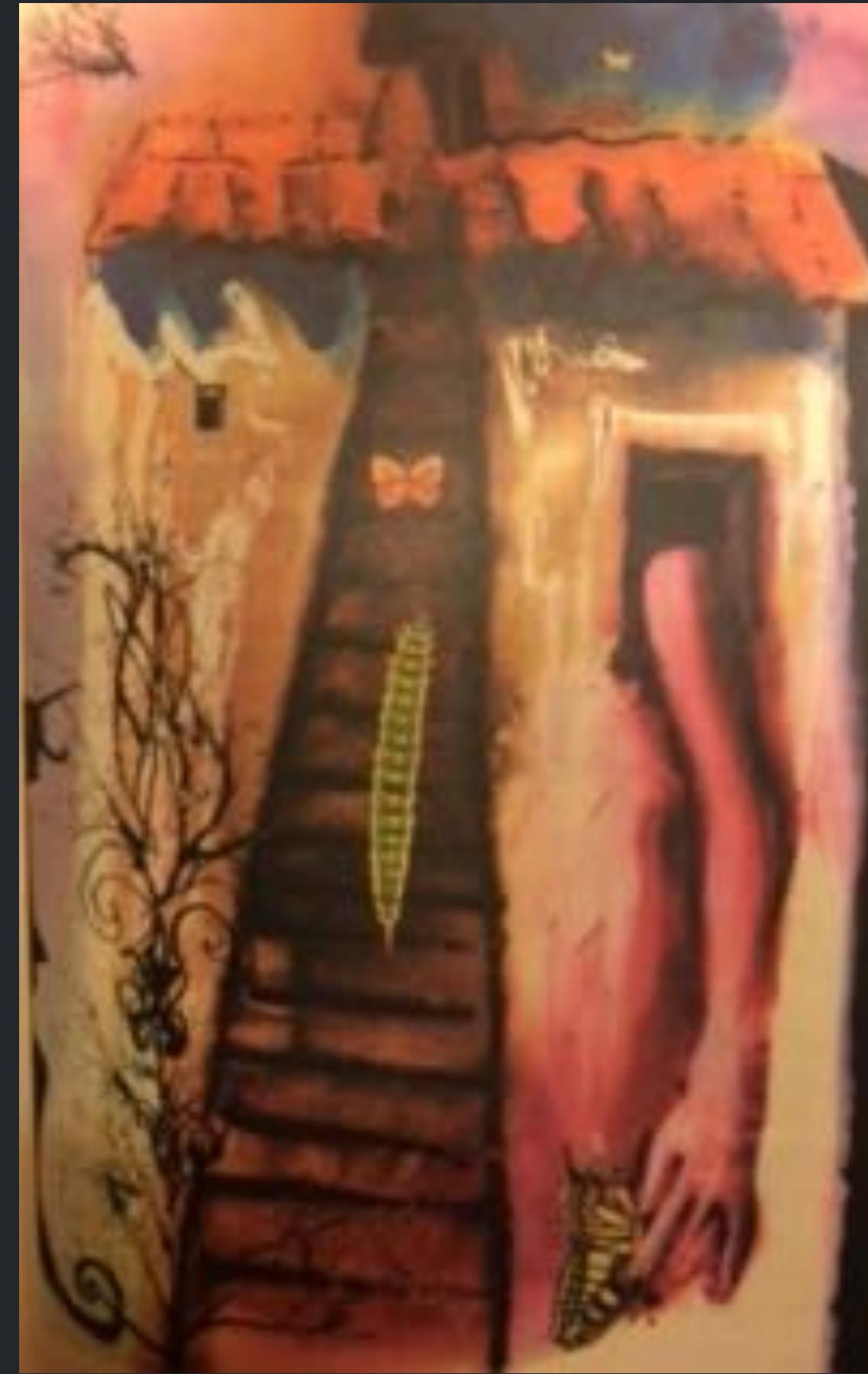


LOVE



TIME

love is the only renewable resource



dA
Alice.

busy being born or busy dying.

You know what my momma used to tell me
If ya can't find something to live for..
.. then you BEST, find something ta die for

2Pac

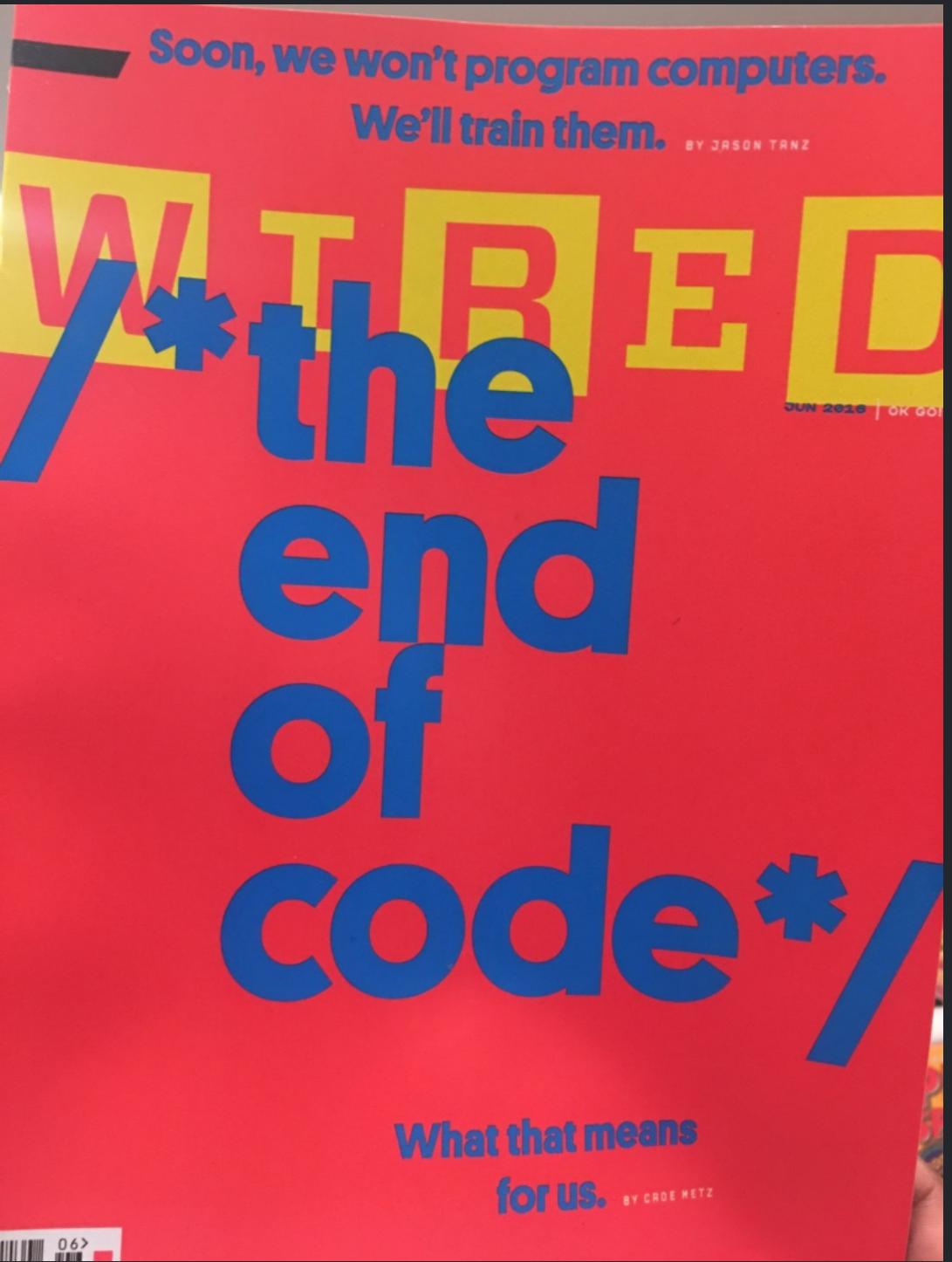
busy being born and busy dying.

Why make one CEO if you can make 10?

Recruit entrepreneurs-in-residence,
not employees!

Inspire 10 great women CEOs!
Change will come in spades!

AI is eating Software!



Software that trains itself with data.
AI is eating Software!

**Manufacturing Intelligence
is training a billion devices.**

Being human beings is a process.
ai optimizes that.

Struggle is the Story!

**You better lose yourself in the music, the moment
you can do anything you put your mind to.**

