

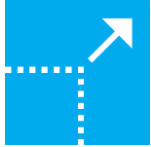
AYASDI

The Five Key Elements to Build, Deploy + Operationalize AI at Scale

Sangeeta Chakraborty, Chief Customer Success Officer, Ayasdi
November 2, 2017



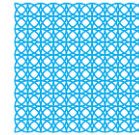
The Challenges of Modern Data



Big + getting
bigger



Noisy + sparse



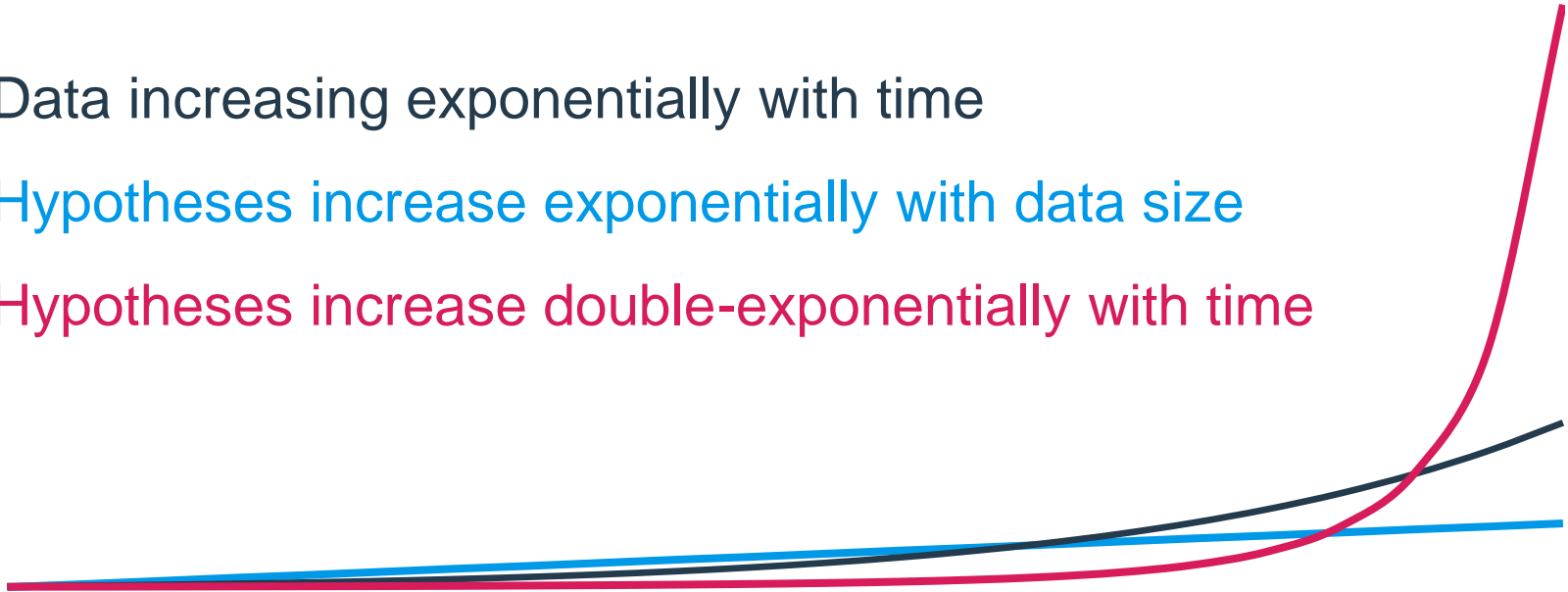
Complex


What Makes it Hard? Too Many Possibilities.

Data increasing exponentially with time

Hypotheses increase exponentially with data size

Hypotheses increase double-exponentially with time





We need AI to solve these problems. But what kind of AI
and what kind of problems?





AlphaGo

Elon Musk @elonmusk · Aug 11
OpenAI first ever to defeat world's best players in competitive eSports. Vastly more complex than traditional board games like chess & Go.

1.1K 12K 40K

Elon Musk Retweeted

OpenAI @OpenAI · Aug 11
Our Dota 2 AI is undefeated against the world's best solo players:

Dota 2
We've created a bot which beats the world's top professionals at 1v1 matches of Dota 2 under standard tournament rules. The bot learned the game from scr...
blog.openai.com


151 2.6K 5.8K

Elon Musk Retweeted

OpenAI @OpenAI · Aug 11
In a few minutes, watch our Dota 2 AI play live on main stage at The International:

OpenAI at The International
We've created an AI which beats the world's top professionals at 1v1 matches of Dota 2. Watch us play on main stage during The International.
openai.com

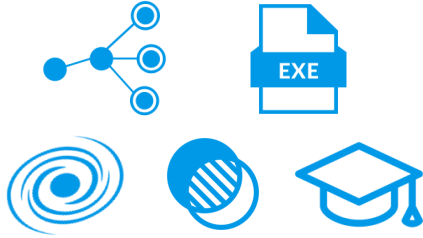
55 930 2.9K



But what about the class of problems that humans are **not** good at performing?

Enterprise AI is about leveraging **data** to **augment human capabilities** and to deploy autonomous applications.

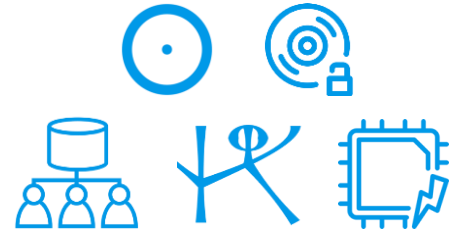
The Components of Enterprise AI



Intelligence



Applications

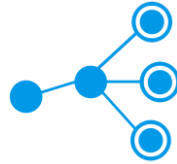


Enterprise scale

The Attributes of Enterprise Intelligence



Discover



Predict



Justify



Act



Learn

AI Applied to Cyber



DISCOVER

New product launch to 50M accounts resulting in 5B events per week



PREDICT

Identified 60 anomalous groups, unknown to existing fraud rules



JUSTIFY

Patterns were described by system to line of business and risk



ACT

Added patterns to fraud detection rulesets



LEARN

System runs lights-out to monitor and update rules as the data evolves

System caught **15 criminals** in the first week of operation

AI Applied Anti-Money Laundering

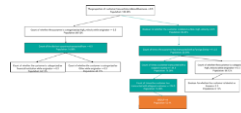


DISCOVER

Apply unsupervised learning to find segments of customers based on an expanded set of features

PREDICT

Use supervised learning methods to find predictive models that assign new customers to the customer segments



JUSTIFY

Use simpler, regulator-friendly machine learning methods to justify each segment



ACT

Added patterns to fraud detection rulesets



LEARN

An interface continuously monitors the process as data evolves

Reduced false positives 26% while finding new launders

AI Applied Clinical Variation Management



DISCOVER

Analyze all EMR + financial data, to automatically surface groups of similar patient procedures.



PREDICT

Accurately predict the quality and cost for the desired treatment outcomes.



JUSTIFY

Every element in the consensus care path is transparent + justified statistically.



ACT

CVM is operationalized through EMR integration



LEARN

CVM continues to see new cases – sourcing innovation and measuring progress + adherence.

Saved \$45M while enhancing patient outcomes



AI goes to market through **applications** and requires **enterprise scale**.

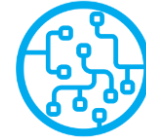
Why Applications



SME's need intelligent interfaces to data (not powerpoint!).



Applications marry SMEs with new lines of inquiry.



SMEs are not AI experts + shouldn't have to be.

An Enterprise Grade Feature Set



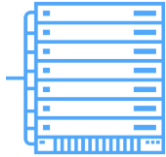
Cloud Enabled



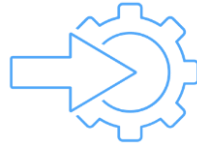
Scalable Math



Access Rights Controls



Scalable on a Dedicated or
Shared Hadoop Cluster



Open Downstream
Integration



Security via AD/Kerberos
Integration

Closing Thoughts



Don't park
innovative
technology in
R&D



Iterate quickly
+ evolve;
commit to fast
timelines



Don't let bad
data dissuade
progress



Run new
systems in
parallel with
current process



Recognize
implied
process
change +
prepare for it



Build a
Center of
Excellence



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