

Challenges to Adopting Artificial Intelligence

Augmented Intelligence for Enterprise

17 November 2017

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INCEPTION PROGRAM



Timing & Opportunity

| From Industry 1.0 to Industry 4.0

1.0 | 1784 | based on mechanical production equipment driven by water and steam power 

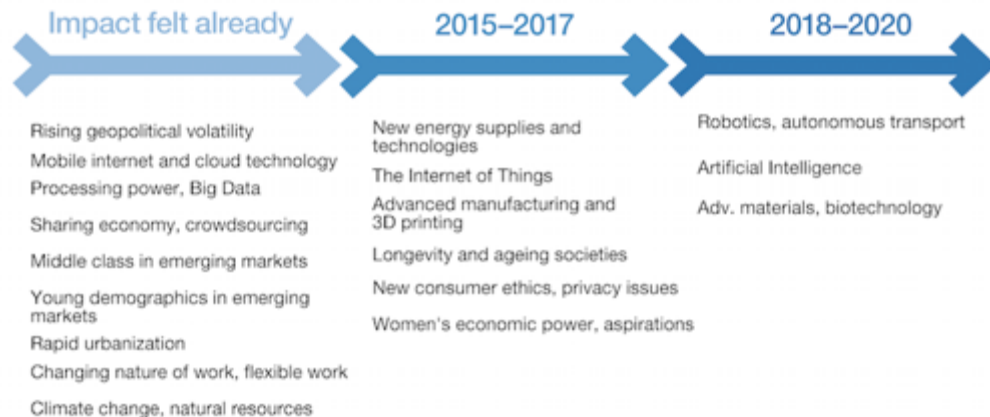
2.0 | 1870 | based on mass production enabled by the division of labor and the use of electrical energy 

3.0 | 1969 | based on the use of electronics and IT to further automate production 

4.0 | tomorrow | based on the use of cyber-physical systems 



Time to impact industries' business models



What Keeps CEOs Awake at Night?

Case Study: Fortune 500 CXO replaced over A.I.



What are the risks and opportunities that AI presents to our company?

"What I've said about autonomous vehicles is ... we have not given an indication of a market introduction date."

Mark Fields, Ford CEO, 2016

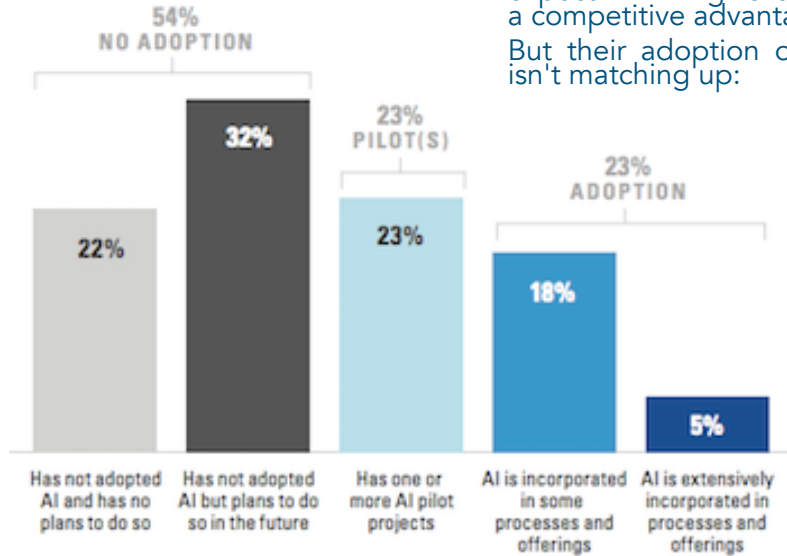
Look at the technology coming into our industry...we really need transformational leadership.

Bill Ford, Chairman, 2017

Executives say AI will change business, but aren't doing much about it

Adoption level of AI

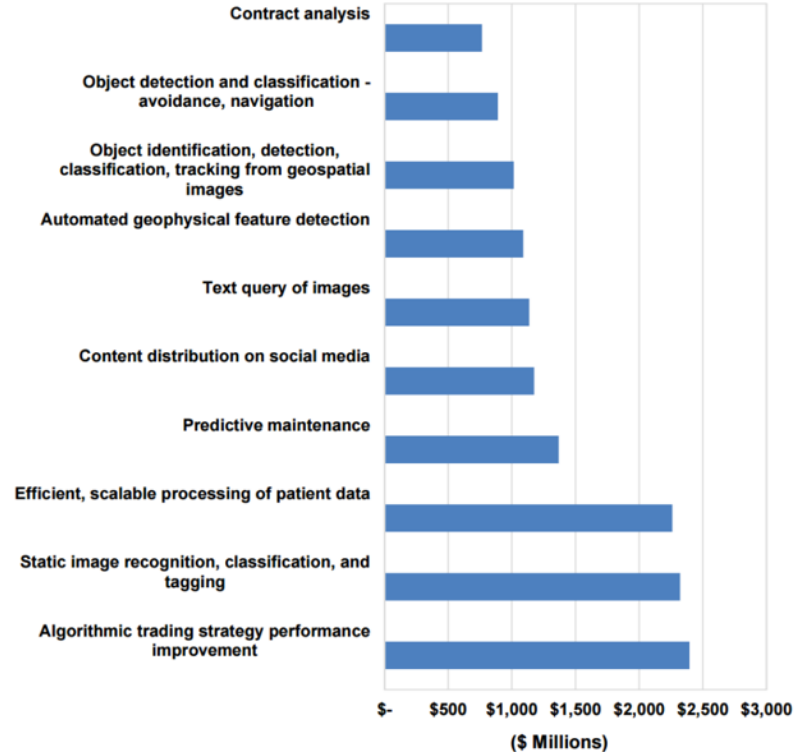
What is the level of AI adoption in your organization?



Key takeaway:

Nearly 85% of the 3,000-plus executives surveyed expect AI will give them a competitive advantage. But their adoption of AI isn't matching up:

Chart 1.2 Artificial Intelligence Revenue, Top 10 Use Cases, World Markets: 2025

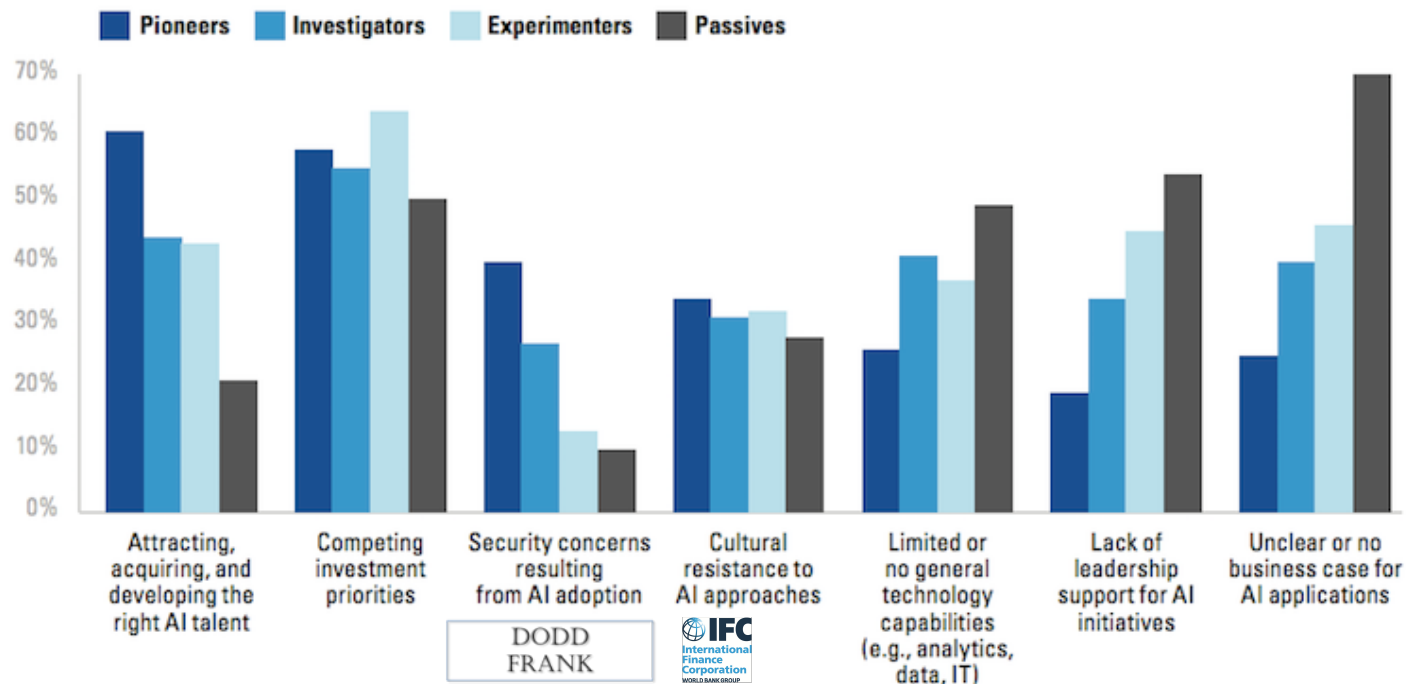


Worldwide Spending on Cognitive and Artificial Intelligence Systems Forecast to Reach \$12.5 Billion This Year

Reduce CXO uncertainty by democratizing A.I. and address the challenges:

Barriers to AI adoption

What are the top three barriers to AI adoption in your organization?



4.4MILLION data scientists needed by 2015



DODD FRANK

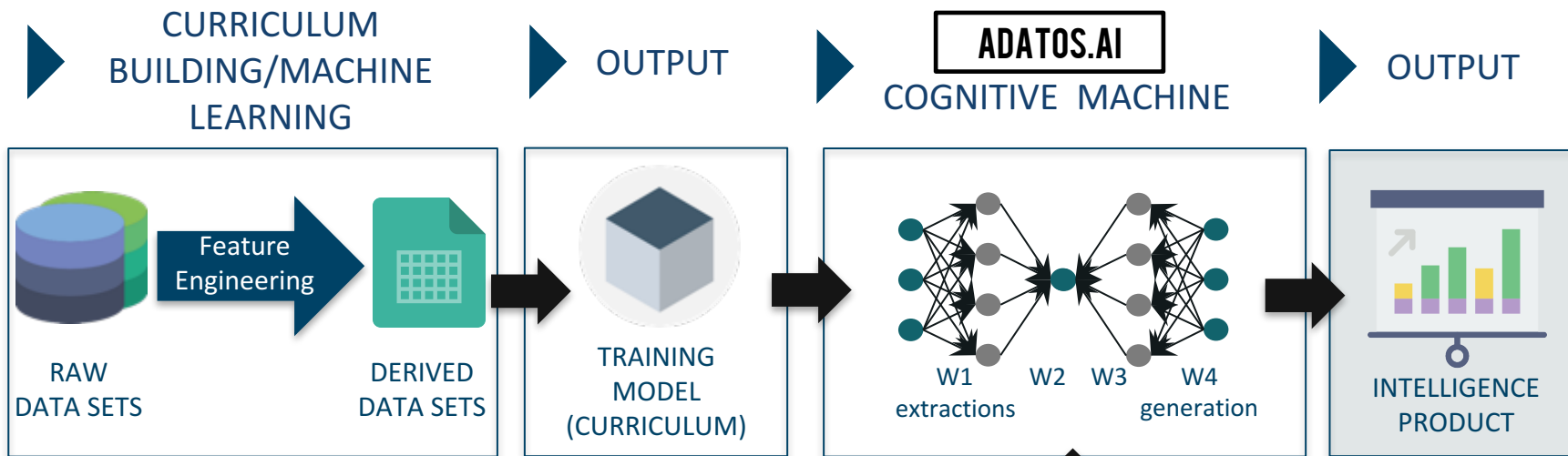


IFRS 17
INSURANCE

Percentage of respondents ranking the selection as one of the top three barriers

<http://sloanreview.mit.edu/projects/reshaping-business-with-artificial-intelligence/>

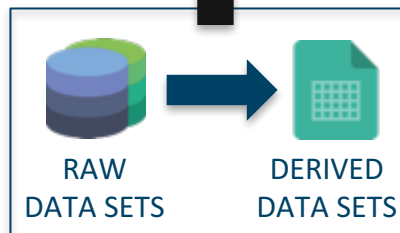
A Data-Driven Approach: A.I. Basic Building Blocks



YOU NEED DATA & COMPUTING POWER...

Ping An, which employs 110 data scientists and launched 30 CEO-sponsored AI initiatives....
"the biggest challenges has been acknowledging the fact that "humans don't want to train algorithms"..."

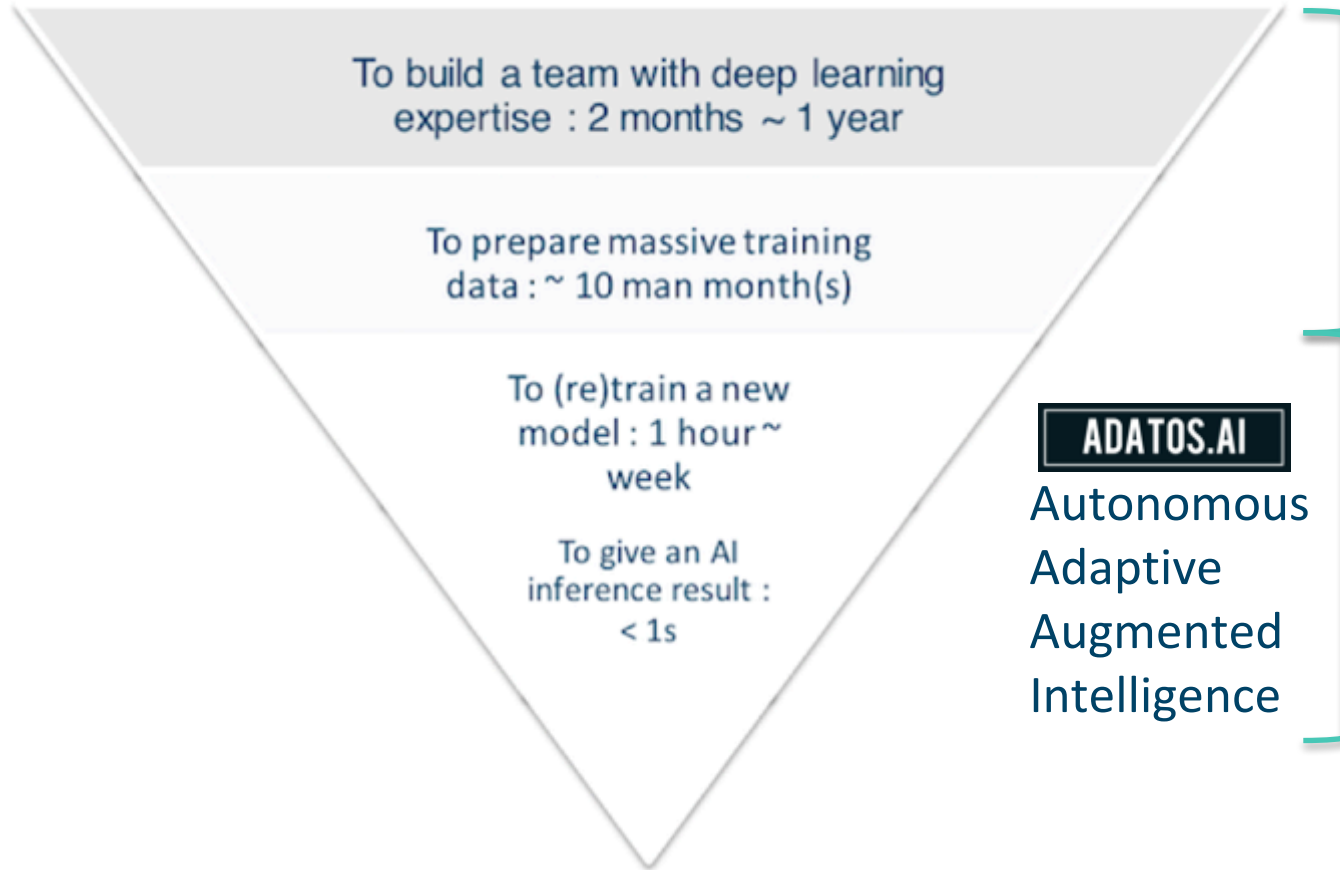
NEW DATA



...TO BENEFIT FROM

**AUTONOMOUS
ADAPTIVE
AUGMENTED
INTELLIGENCE**

Challenges to Achieving ROI



What if you could minimize or eliminate this effort? And

Immediately provide Data Science capability despite a shortage of qualified talent?

What if your A.I. could realize Financial R.O.I. in weeks?

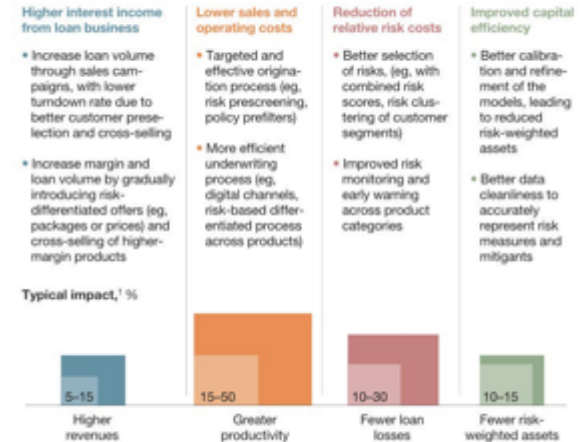
An improvement in the Gini coefficient of one percentage point in a default prediction model can save a typical bank \$10 million annually for every \$1 billion in underwritten loans.

Accurate data capture and well-calibrated models have helped a global bank reduce risk-weighted assets by about \$100 billion, leading to the release of billions in capital reserves that could be redeployed in the bank's growth businesses.

Gini coefficients of 0.75 or more in default prediction models are now possible...banks can approve up to 90 percent of consumer loans in seconds, generating efficiencies of 50 percent and revenue increases of 5 to 10 percent.

Exhibit 1

Analytically enhanced credit models can improve banks' returns in four ways.

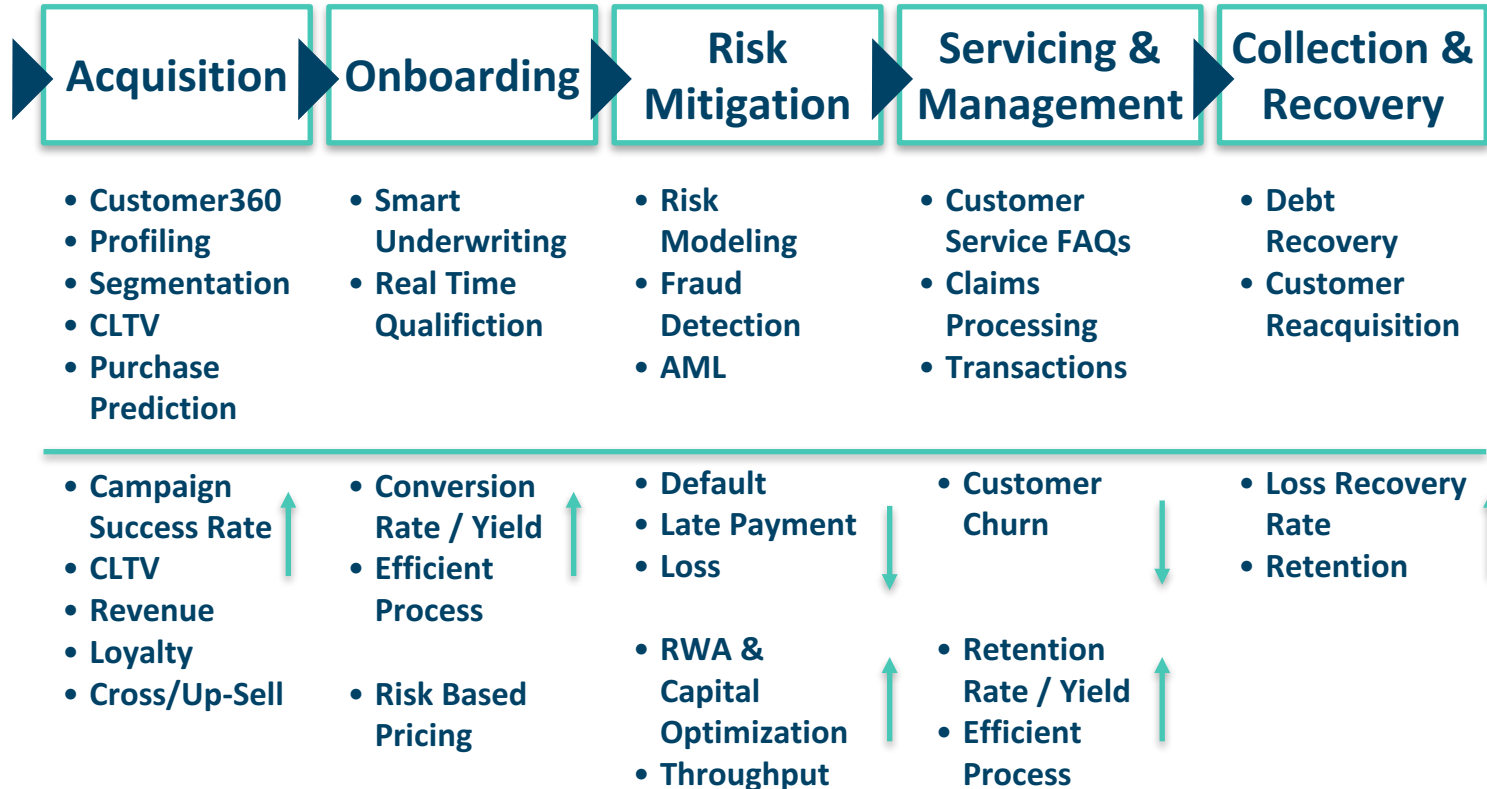


¹Impact not additive and depends on the bank's portfolio.

McKinsey & Company

<https://www.mckinsey.it/idee/risk-analytics-enters-its-prime>

A.I. Use Cases – Opportunities in the Banking Value Chain



Banking and securities investment services collectively, represent a quarter of [\$12.5B] worldwide spending on cognitive/AI solutions. Stringent compliance requirements are key drivers to innovations in fraud and risk detection.

Democratizing AI: Data Science as a Service – Augmented Intelligence ‘in a Box’

3 Principles of achieving and democratizing Augmented Intelligence:

Purpose – Transparency - Skill

<https://www.ibm.com/blogs/think/2017/05/41041/>



ADATOS.AI

Empowering next generation competitive edge advantage for Financial Industry

"Banks can now extract deeper and more valuable insights from their ever-growing mountains of data.

Machine-learning techniques, such as deep learning, random forest, and XGBoost, are now common at top risk-analytics departments.

Banks that are fully exploiting these shifts are experiencing a "golden age" of risk analytics, capturing benefits in the accuracy and reach of their credit-risk models and in entirely new business models. ...resulting in higher profitability.' - McKinsey Report

Adatos builds and deploys elegant, prize-winning Data Intelligence solutions tailor-made for the private sector.

Combining over three decades of extensive experience in Intelligence Analytic Tradecraft with advanced Deep Learning technology, Adatos delivers scale and consistent outperformance of industry benchmark metrics to valued clients in the Financial Services, Insurance and Retail industries.


- Mature A.I. approach
- Mature client's adoption
- Proven deep learning algorithm
- Rapid time to market
- Rapid ROI

ADATOS.AI Solution Offerings is deeply engineered with IBM OpenPower Cognitive technology to tackle new complex problems with unparalleled speed and accuracy. This total solution leverages on NVIDIA Tesla P100 with IBM only CPU:GPU NVLink technology and IBM PowerAI Software Stack.

Integrated Solution Offerings

- ⦿ **ADATOS.AI for Debt Recovery**
 - More than 85% precision on identifying non-performing loans
 - More than 3x savings in resources spent on bad debt collection
- ⦿ **ADATOS.AI for Fraud Detection**
 - Accurately identified anomalous behaviour with 99% precision
 - More than 90% reduction in false positives
- ⦿ **ADATOS.AI for Credit Scoring**
 - More than 25% saving in loan loss provisioning
 - 2x increased accuracy on Gini Coefficient

IBM OpenPower Systems S822LC



8300-0785

- IBM PowerAI Software, Linux Operating Systems
- 20 x 2.86 GHz POWER8 CPU Cores, 512 GB Memory
- 4 x NVIDIA Tesla P100 GPUs
- 2 x 3.84 TB SSD storage devices



CORAL – Collaboration of Oak Ridge, Argonne and Livermore

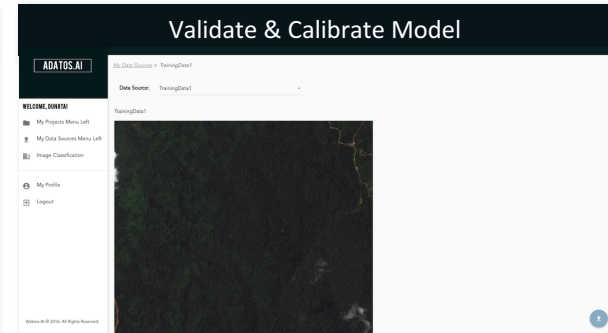
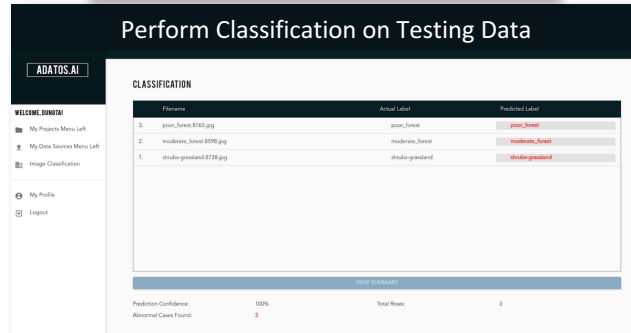
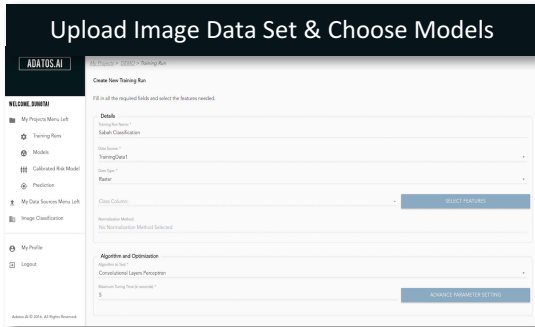
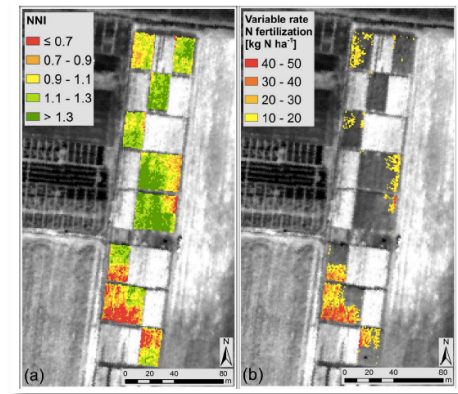
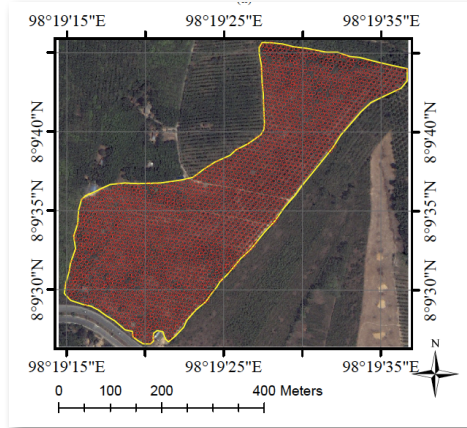
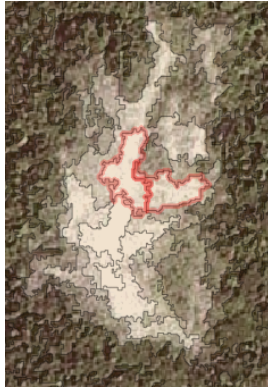


Applying A.I. to Save Lives

- ▶ Tuberculosis affects one-third of the world's population; accounting for 1.8 Million annual deaths worldwide
- ▶ The World Health Organization (WHO) ranks Tuberculosis (TB) as the 7th leading cause of death worldwide; and the #1 cause of death in AIDS related cases.
- ▶ Out of 196 countries, 22 high burden countries accounted for 83% of all estimated annual new incident cases worldwide: India, Indonesia and China, the other countries are Nigeria, Pakistan, South Africa, Bangladesh, Philippines, DR Congo, Ethiopia, Myanmar, UR Tanzania, Mozambique, Vietnam, Russian Federation, Thailand, Kenya, Brazil, Uganda, Afghanistan, Cambodia & Zimbabwe.



Agricultural and Forestry Yield Optimization



Rapid Classification of Remote Sensing Images

Addendum

ADATOS.AI

Justifying A.I. Use Cases (Ranked by ROI?)

SIGNAL
PROCESSING

Automatic Speech Recognition (ASR) and Natural Language Understanding (NLU)

Computer Vision (CNN)

Micro-Segmentation/Customer Profiling, Anomaly Detection

COGNITIVE
PROCESSING

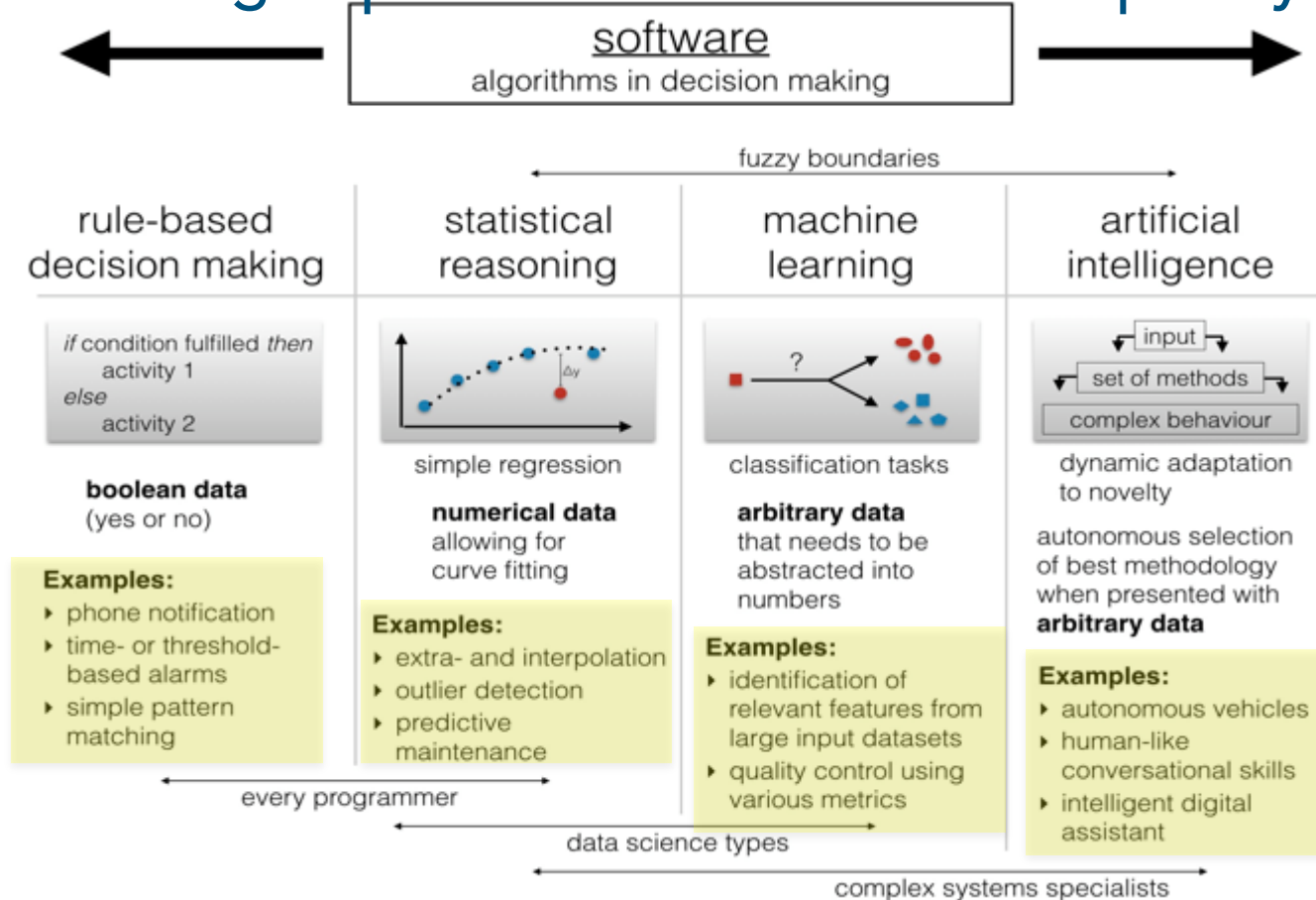
Process Yield Optimization leveraging SCADA/IoT

Autonomous Vehicles

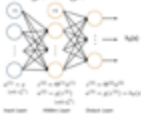
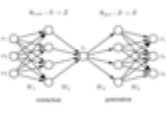











Finance



Decision Making Sophistication and Data Complexity



A.I. Maturity

GEN 0 Statistics	GEN 1.0 Big Data	GEN 2.0 AI	GEN 2.5 AI	GEN 3.0 AI
Heuristics/ Rules Based	Data driven	Machine Learning/ Natural Language Processing		
				
				<div style="border: 2px solid black; padding: 5px; display: inline-block;"> ADATOS.AI </div>
Statisticians "Not necessarily true"	Data Scientists "Boil the Ocean"	Data Scientists "Algorithmic Library"	Data Scientists "Signal Processing"	Cognitive Machines 
LEVEL OF SOPHISTICATION				
 <div style="background-color: #003366; color: white; padding: 10px; display: inline-block; font-weight: bold; font-size: 1.2em;"> MACHINES </div>				