



Intel Artificial Intelligence

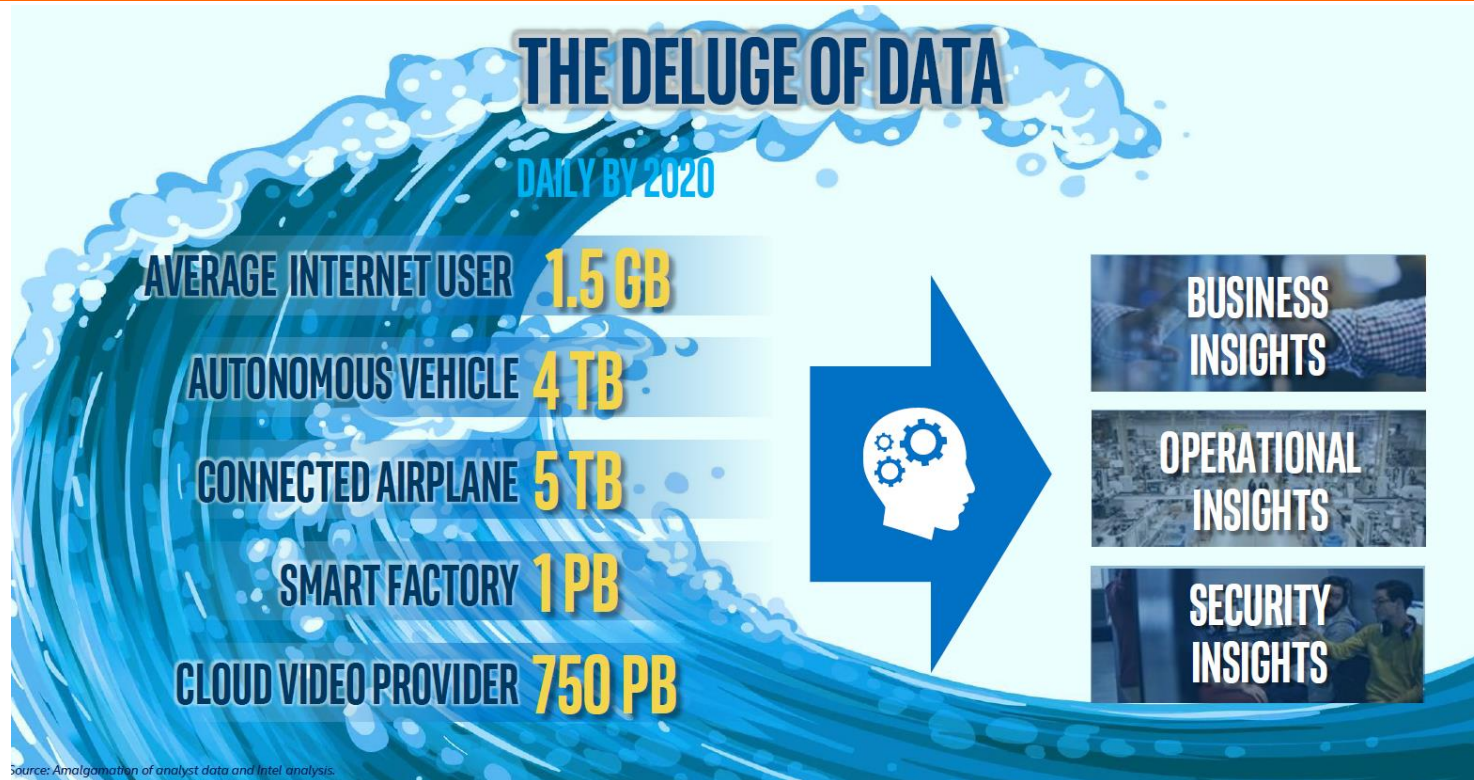
RUTRONIK EMBEDDED

Artificial intelligence

Intel Deep Learning Demo on

Rutronik Booth in HALL C4-434





Intel scales AI down to Edge Devices to reduce data

AI WILL TRANSFORM



CONSUMER

Smart Assistants
Chatbots
Search
Personalization
Augmented Reality
Robots



HEALTH

Enhanced Diagnostics
Drug Discovery
Patient Care
Research
Sensory Aids



FINANCE

Algorithmic Trading
Fraud Detection
Research
Personal Finance
Risk Mitigation



RETAIL

Support Experience
Marketing
Merchandising
Loyalty
Supply Chain
Security



GOVERNMENT

Defense
Data Insights
Safety & Security
Resident Engagement
Smarter Cities



ENERGY

Oil & Gas Exploration
Smart Grid
Operational Improvement
Conservation



TRANSPORT

In-Vehicle Experience
Automated Driving
Aerospace
Shipping
Search & Rescue



INDUSTRIAL

Factory Automation
Predictive Maintenance
Precision Agriculture
Field Automation



OTHER

Advertising
Education
Gaming
Professional & IT Services
Telco/Media
Sports

Source: Intel forecast

AI ADOPTION IS NASCENT

According to a recent Gartner survey...

46%

of Chief Information Officers (CIOs) have developed plans to implement AI, but **only**

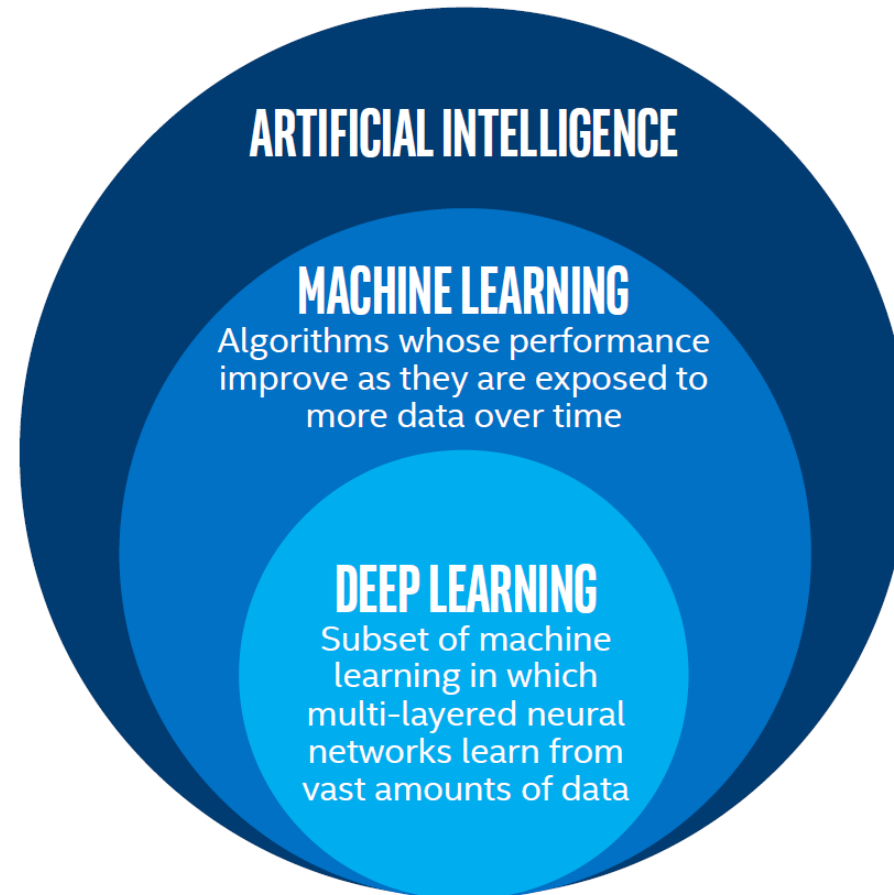
4%

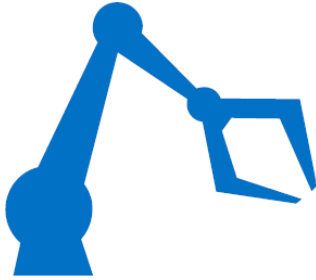
have implemented AI so far.

Source: Gartner Says Nearly Half of CIOs Are Planning to Deploy Artificial Intelligence. February 2018 (<https://www.gartner.com/newsroom/id/3856163>)

ARTIFICIAL INTELLIGENCE

is the ability of machines to learn from experience, without explicit programming, in order to perform cognitive functions associated with the human mind





WHICH APPROACH IS RIGHT?

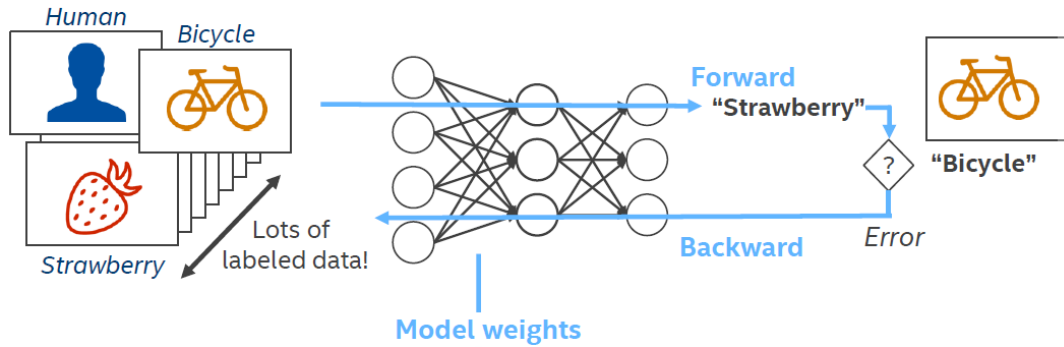
A large **manufacturer** uses data to improve their operations, with each challenge using a different approach to deliver maximum business value at the lowest possible cost

CHALLENGE	BEST APPROACH	APPROACH	ANSWER
How many widgets should we manufacture?	Analyze historical supply/demand	Analytics/ Business Intelligence	10,000
What will our yield be?	Algorithm that correlates many variables to yield	Statistical/ Machine Learning	At current conditions, yield will be at 90% with 10% loss expected
Which widgets have visual defects?	Algorithm that learns to identify defects in images	Deep Learning	Widget 1003, Widget 1094...

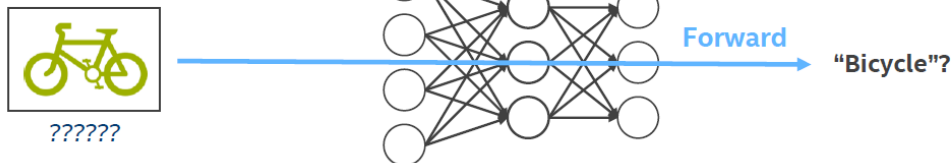
LEARN
MORE IN
THE NEXT
SLIDES

DEEP LEARNING BASICS

TRAINING

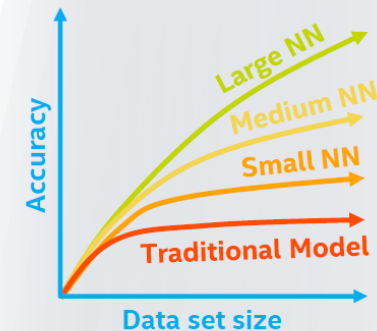


INFERENCE



DID YOU KNOW?

Training with a large data set AND deep (many layered) neural network often leads to the highest accuracy inference





Bring Your AI Vision to Life Using Intel's Comprehensive Portfolio

DATA

Intel
analytics
ecosystem
to get your
data ready

SOLUTIONS

Partner ecosystem to facilitate AI in
finance, health, retail, industrial & more

TOOLS

Software to accelerate development
and deployment of real solutions

HARDWARE




Multi-purpose to purpose-built
AI compute from device to cloud

FUTURE

Driving AI
forward
through R&D,
investments
and policy

Deep Learning Demo on Rutronik Booth running on

- Intel NUC
- Intel Compute Card
- Intel Movidius VPU

IMAGE INPUT	RESULT
	Female, 18.97
	Male, 26.52
	Male, 33.41

Age & Gender Recognition

This neural network-based model provides age and gender estimates with enough accuracy to help you focus your marketing efforts.



Bernie Estermann
Business Development Manager Intel
Phone : +41 44 947 37 39
E-Mail : Bernhard.Estermann@rutronik.com

www.rutronik.com/embedded