



Azure AI

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Director, Transformational Solutions



Event Agenda:

9:30am - 10:00am	Check-in
10:00am - 11:00am	Microsoft AI: Our Story - Introduction to the Microsoft AI platform, total Azure integration, use cases, and customer success stories
11:00am - 12:30pm	Workshop: Build a solution with image or video services
12:30pm - 1:00pm	Lunch
1:00pm - 2:30pm	Workshop: Build a solution with speech and text analytics
2:30pm - 2:45pm	Break
2:45pm - 4:30pm	Workshop: Machine learning models with Azure Machine Learning, Azure Databricks, and Azure HD Insight
4:30pm – 5:00pm	Chat with AI and Data Experts

Azure Data + AI

Data



Data Modernization on-premises



Data modernization to Azure



Globally distributed data



Cloud Scale Analytics

+

AI



AI apps & agents



Knowledge mining



Machine learning

AI

Vision

Speech

Language

Customized language understanding Text-to-speech
Content moderation Spell

Speech translation check

Custom image classification

Speaker recognition Entity linking

Sentiment analysis, & augmentation

key phrase extraction **Image tagging**

Custom voice Object detection Text translation Intend
OCR handwriting analysis

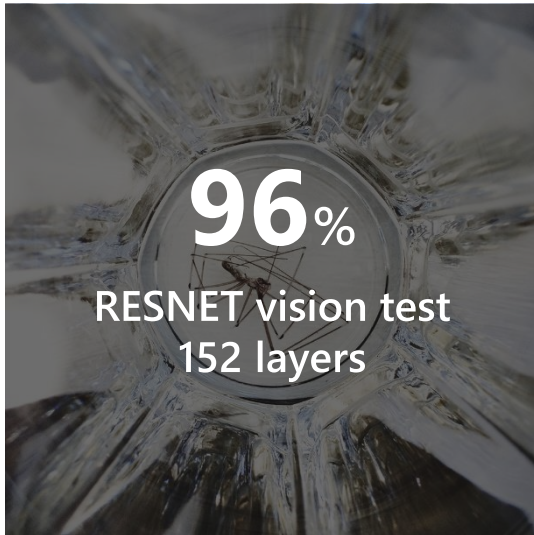
Emotion detection **recognition** Custom translation
Video insights

Face Custom speech Assisted text moderation

identification Speech transcription

Microsoft AI breakthroughs

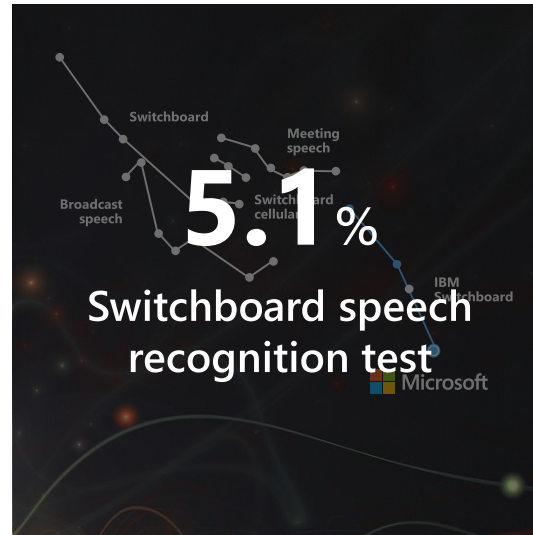
Vision



2016

Object recognition
Human parity

Speech



2017

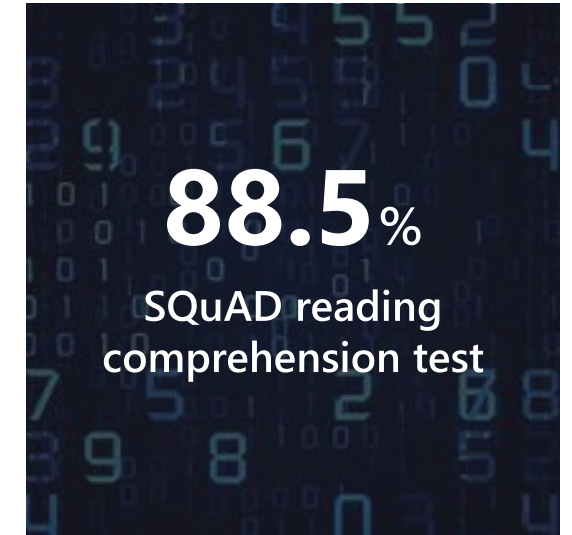
Speech recognition
Human parity

Language



March 2018

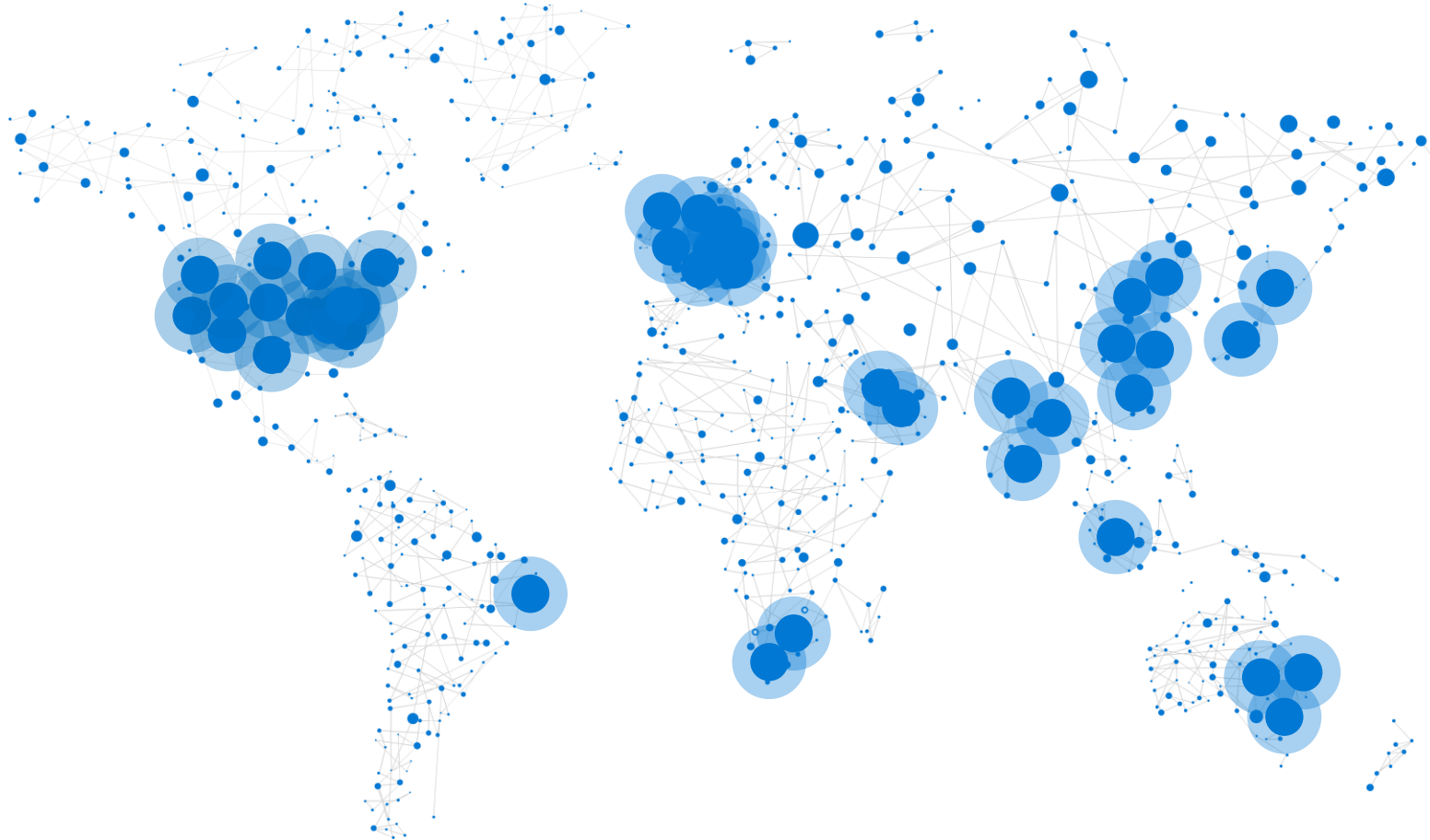
Machine translation
Human parity



January 2018

Machine reading comprehension
Human parity

Azure



Productive | Hybrid | Intelligent | Trusted

Azure is the best place for AI

Accelerate time to value
with agile tools and services



Pretrained AI
services



Powerful
tools



Comprehensive
platform

Innovate with AI everywhere –
in the cloud, at edge and on-premises



Cloud



Edge



On-premises

Use any language, any development
tool and any framework



Benefit from industry-leading security, privacy,
compliance, transparency, and AI ethics standards

>90% of Fortune 500 companies
use Microsoft Cloud

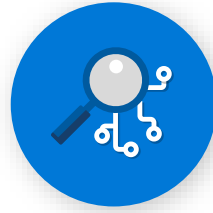
Azure AI

AI apps & agents



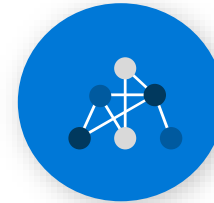
Azure Bot Service
Azure Cognitive Services

Knowledge mining



Azure Cognitive Search

Machine learning



Azure Databricks
Azure Machine Learning
Azure AI infrastructure

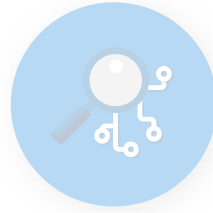
Azure AI

AI apps & agents



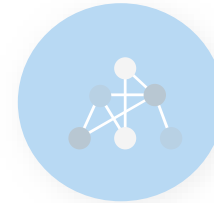
Azure Bot Service
Azure Cognitive Services

Knowledge mining



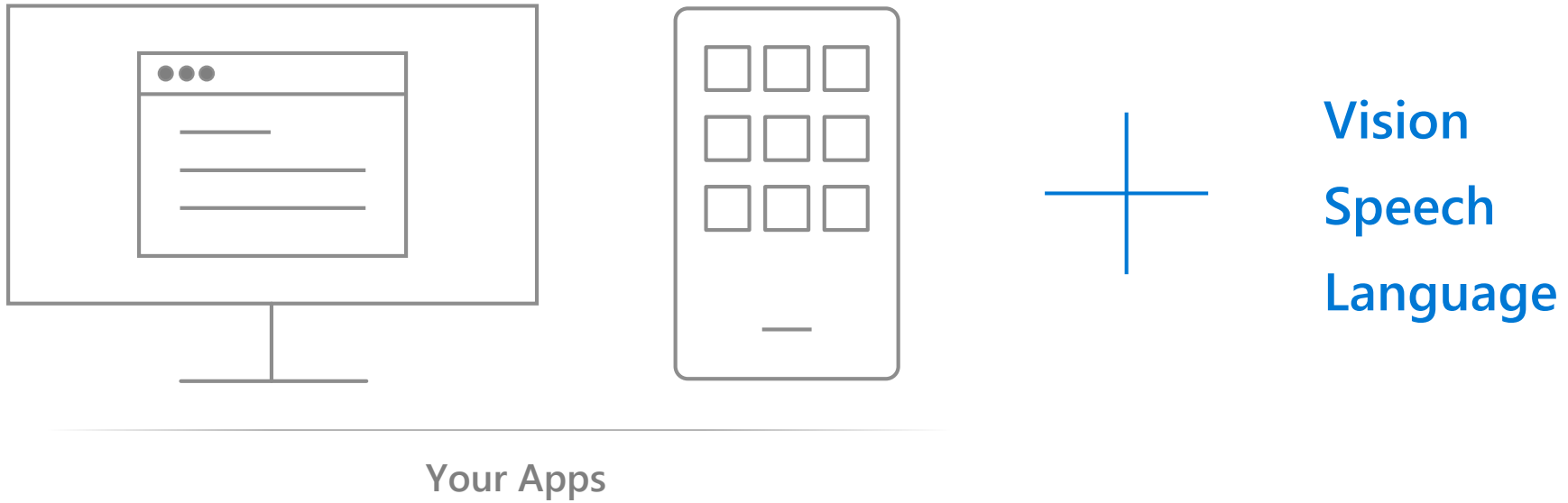
Azure Cognitive Search

Machine learning



Azure Databricks
Azure Machine Learning
Azure AI infrastructure

Building AI apps & agents





200,000 customers get information on shipments, rates, and UPS locations with the customer service chatbot



70% of the 600 million technical support cases per year are handled by AI



80% completion rate and **4% increase in views** achieved through automatic video recommendation based on article content



Cognitive Services

Infuse your apps with powerful, pre-trained AI models

Customize easily and tailor to your needs

Train in the cloud and deploy anywhere



Vision



Speech



Language



Search

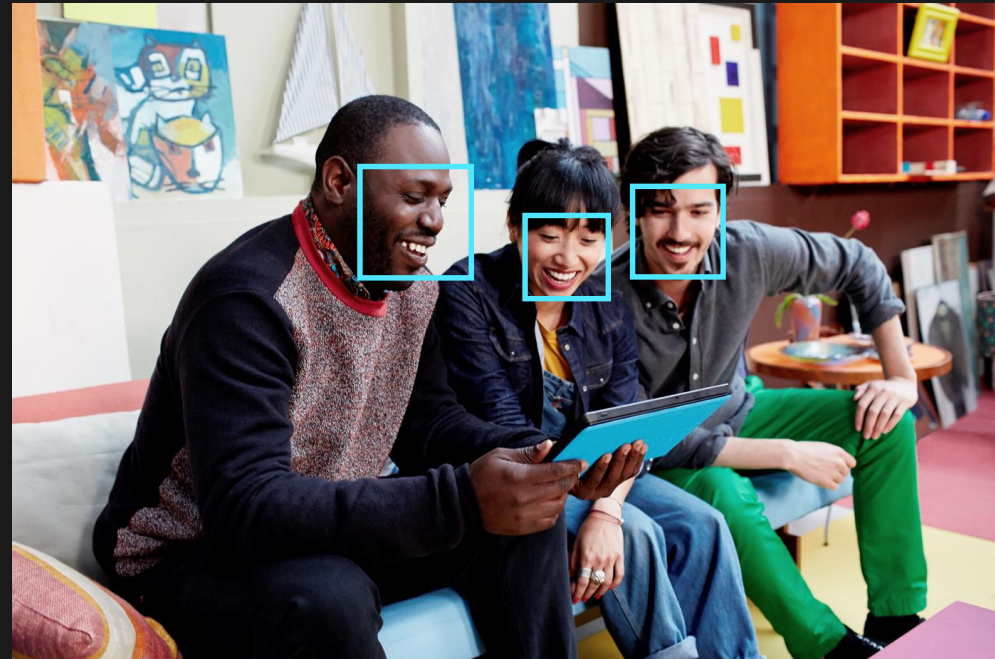
Bot Service

Accelerate bot development with an integrated environment and pre-built templates

Engage your audience easily across multiple channels



Cognitive Services Demo



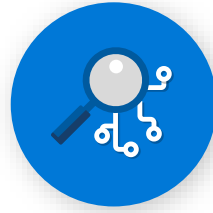
Azure AI

AI apps & agents



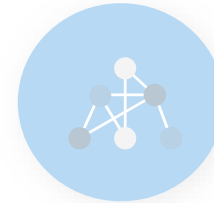
Azure Bot Service
Azure Cognitive Services

Knowledge mining



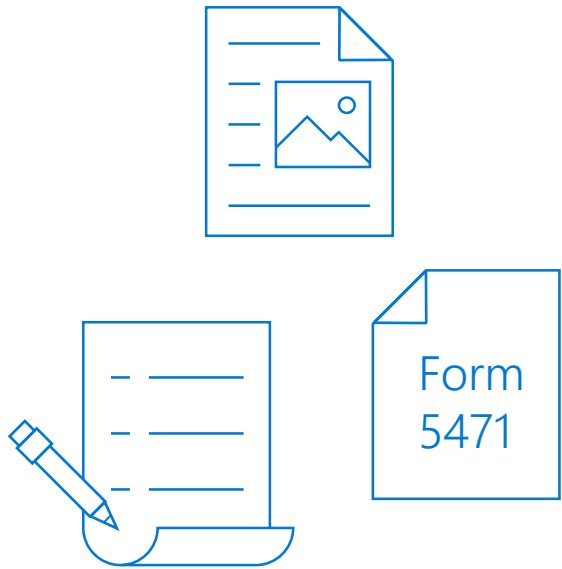
Azure Cognitive Search

Machine learning



Azure Databricks
Azure Machine Learning
Azure AI infrastructure

What is knowledge mining?



**Unlock valuable
information lying latent
in all your content**

Knowledge mining with Azure Search

Documents



Key Phrase extraction



Organization entity extraction



Face detection



Custom skills

Cutting-edge AI



Location entity extraction



Persons entity extraction



Celebrity recognition



Landmark detection



Sentiment analysis



Language detection

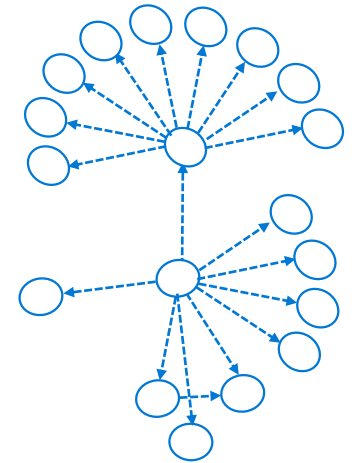


Tag extraction



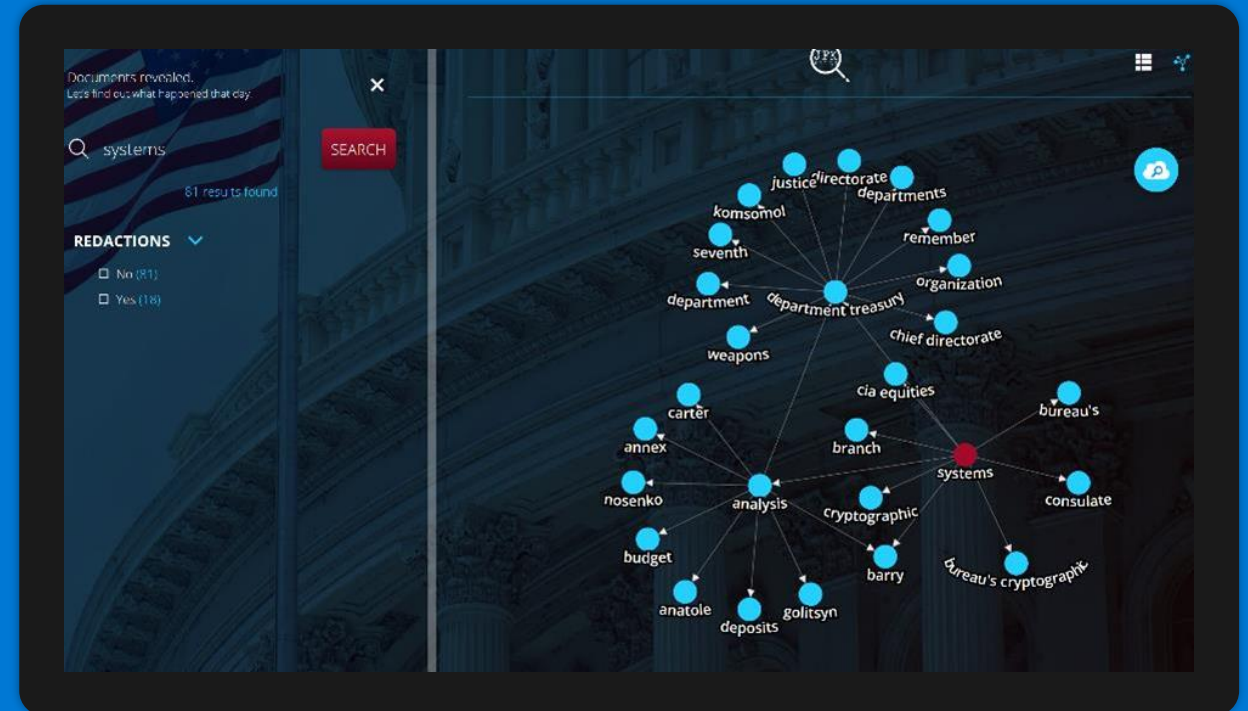
Printed text recognition

Fully text-searchable rich index



Knowledge Mining Demo

JFK Files



Customer examples



auto
TRADER.ca

Canada's largest automobile search
site drives seamless search experience



audioburst

Audio AI experts use cloud-based
search platform to connect listeners
to audio content



JLL

Prime property listings site powered
by cloud-based search and analytics

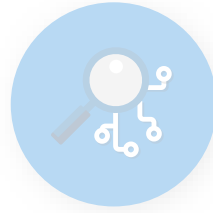
Azure AI

AI apps & agents



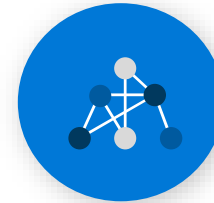
Azure Bot Service
Azure Cognitive Services

Knowledge mining



Azure Cognitive Search

Machine learning



Azure Databricks
Azure Machine Learning
Azure AI infrastructure

Machine learning on Azure

Sophisticated pretrained models

To accelerate solution development with easy to use pretrained models



Vision



Speech



Language



Search

Cognitive Services

Popular frameworks

Build sophisticated deep learning solutions



Pytorch



TensorFlow



Keras



Onnx

Productive services

Empower your development teams



Azure
Databricks



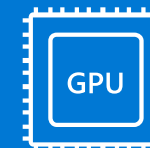
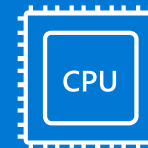
Azure
Machine Learning



Machine Learning
VMs

Powerful infrastructure

Accelerate time to value





Popular frameworks

Build sophisticated deep learning solutions

Use your favorite deep learning frameworks



TensorFlow



PyTorch



Scikit-Learn



MXNet



Chainer



Keras



without getting locked into one framework



ONNX

Community project created by Facebook and Microsoft

Use the best tool for the job. Train in one framework and transfer to another for inference



Productive services

Empower your development teams



Integrated data science & data engineering teams

Desktop solutions not adequate

Need a unified big data & ML solution



Azure Databricks

+



Azure Machine Learning



Individual data scientists

Desktop solutions adequate

Need cloud for sporadic compute needs



Machine Learning VMs

Azure Databricks

Enable collaboration between data scientists and data engineers with an interactive productive workspace

Prepare and clean data at massive scale with the language of your choice

Build and train models with pre-configured machine learning and deep learning optimized clusters



Azure Machine Learning

Track experiments for reproducibility and auditing needs. Identify and promote your best models

Deploy and manage your models using containers to run them anywhere

Powerful infrastructure

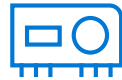
Accelerate deep learning



CPUs

General purpose machine learning

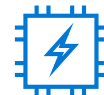
D, F, L, M, H Series



GPUs

Deep learning

N Series



FPGAs

Specialized hardware accelerated deep learning

Project Brainwave

Optimized for flexibility

Optimized for performance

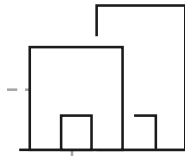
Flexible deployment

Deploy and manage models on intelligent cloud and edge

Train & deploy



Train & deploy



Track models in production
Capture model telemetry
Retrain models automatically



Deploy

Customer examples



asos

13M personalized experiences with
33 orders/second



**Rockwell
Automation**

\$300k/day cost savings with
predictive maintenance



quarterspot

85% savings in risk calculation &
under-writing costs
50% lower loan defaults

Azure is the best place for machine learning

Sophisticated pretrained models

Most comprehensive set of pretrained services



Vision



Speech



Language



Search

Popular frameworks

Open & interoperable



Pytorch



TensorFlow



Keras



Onnx

Productive services

Machine learning at scale



Azure
Databricks



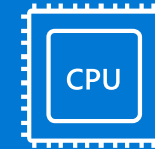
Azure
Machine Learning



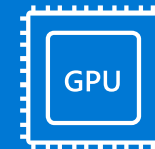
Machine Learning
VMs

Powerful Infrastructure

Most comprehensive
Lowest cost inferencing using FPGAs



CPU



GPU



FPGA

Flexible deployment

From cloud to edge



On-premises



Cloud



Edge

Thank you