

Introduction to Azure ML

INTRODUCTION TO AZURE ML



Introduction to Azure ML

In this session

- What Bill have to say?
- What is Machine Learning?
- What is Azure ML?
- What is Azure ML Studio?
- Artificial Intelligence VS AI
- ML paradigm
- Everyday examples of predictive analytics
- Machine Learning work flow
- Machine learning language
- Cortana Intelligence Suite (CIS)
- Google Machine Learning
- Amazon Machine Learning

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What Bill have to say?

“A breakthrough in machine learning would be worth ten Microsofts,”

Bill Gates

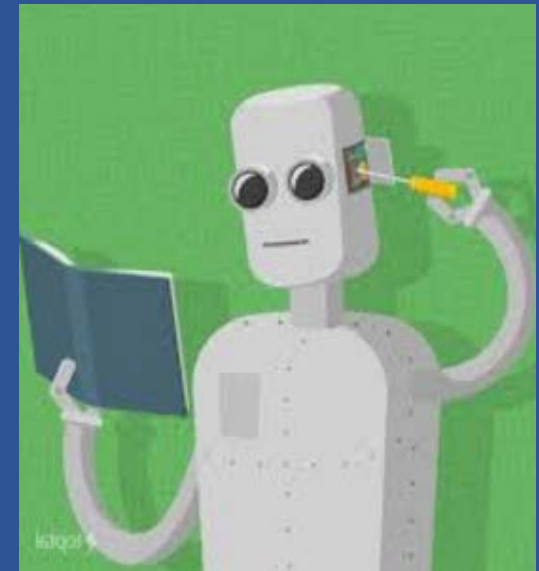


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What is Machine Learning?

What is Machine Learning?

- Subfield of computer science
- Ability to learn without being explicitly programmed
- Algorithms that can learn from and make predictions on data
- Closely related to computational statistics
- Focuses on prediction-making
- Sometimes mixed with Data Mining (DM)
- Used complex models and algorithms
- Predictive analytics

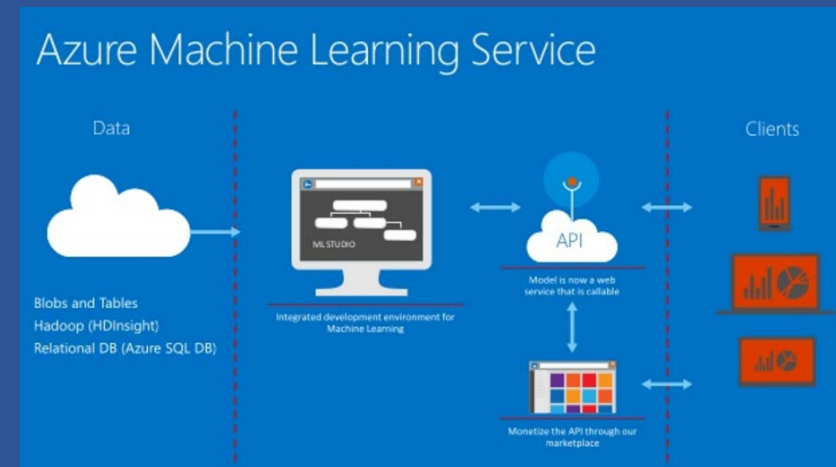


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What is Azure ML?

What is Azure ML?

- Pronounce = Air-Cher
- Part of Azure Cloud platform
- Part of Cortana Intelligence Suite
- Platform as a service (PaaS)
- Create systems that improve with experience
- Help turning data into software
- Help training with huge volumes of data
- Used to predict certain patterns, trends, and outcomes
- Predictive analytics is the underlying technology
- Use the past to predict the future



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What is Azure ML Studio?

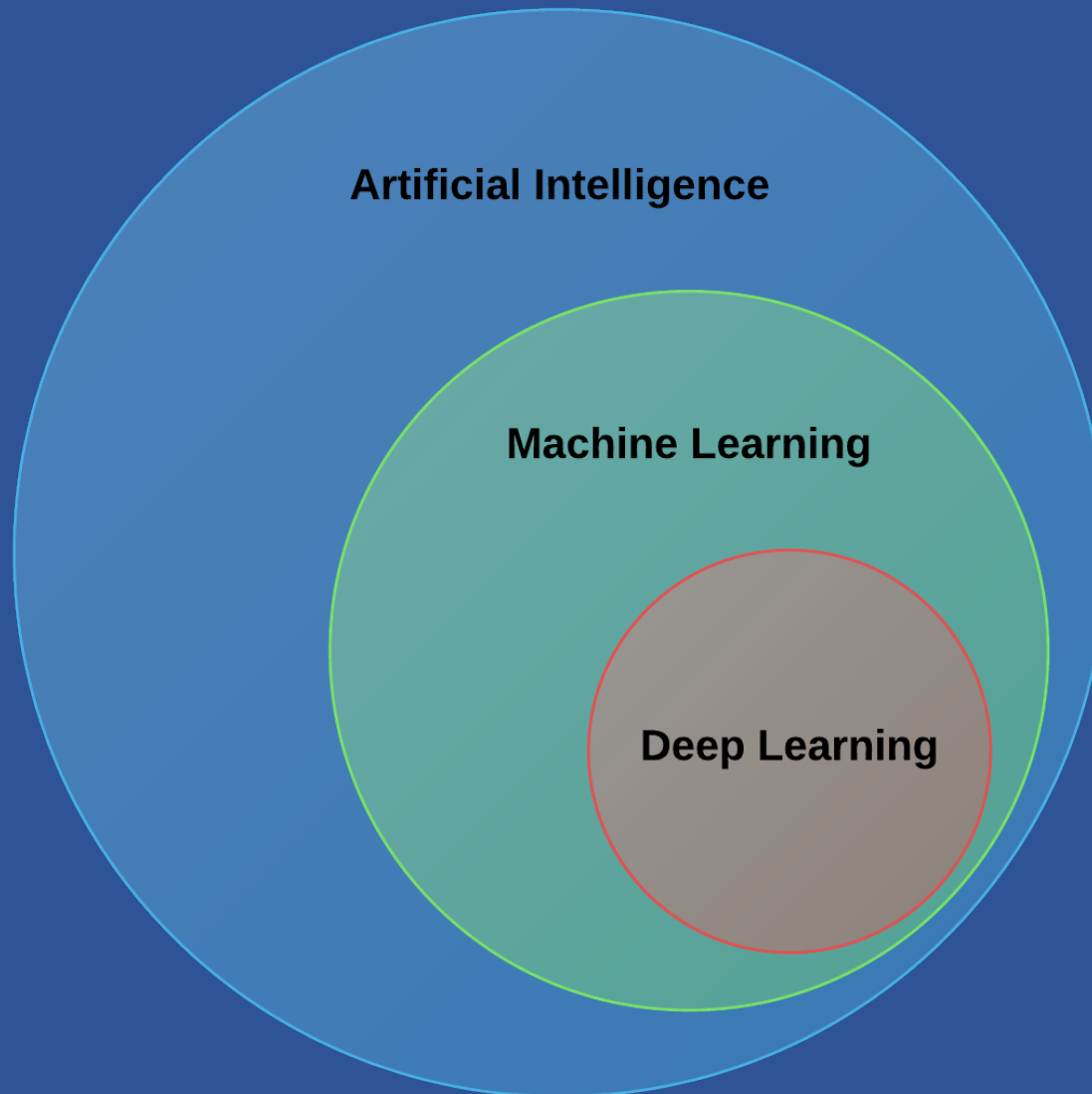
Azure Machine Learning Studio

What is Azure ML Studio?

- Is a collaborative tool
- Drag-and-drop
- Use to build, test, and deploy predictive analytics solutions
- Publishes models as web services
- Easily be consumed by custom apps or BI tools
- Is where data science, predictive analytics, cloud resources, and your data meet.

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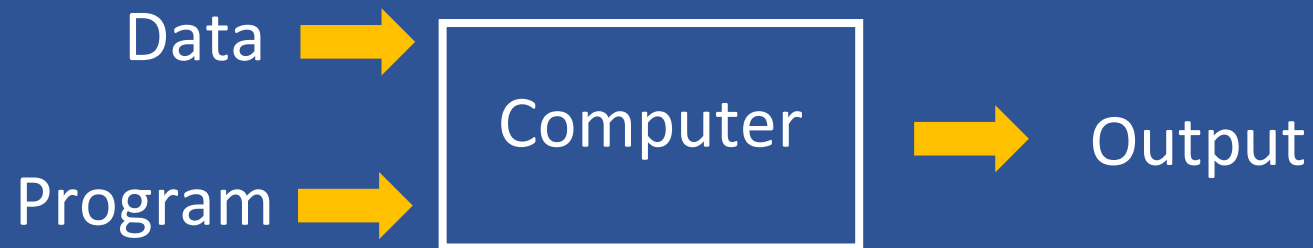
Artificial Intelligence VS ML



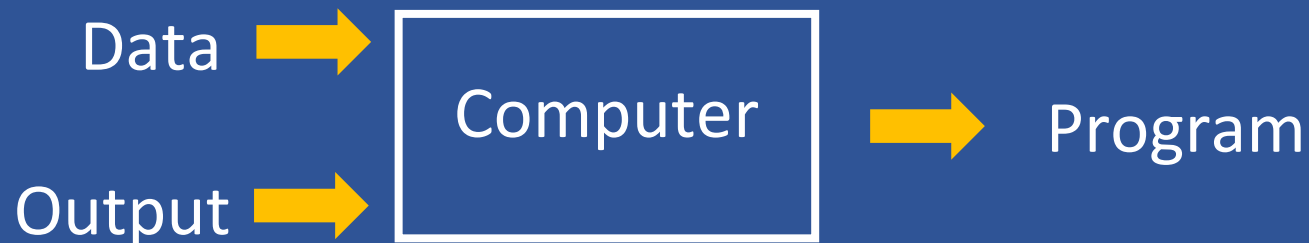
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ML paradigm

Traditional Programming



Machine Learning



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Everyday examples of predictive analytics

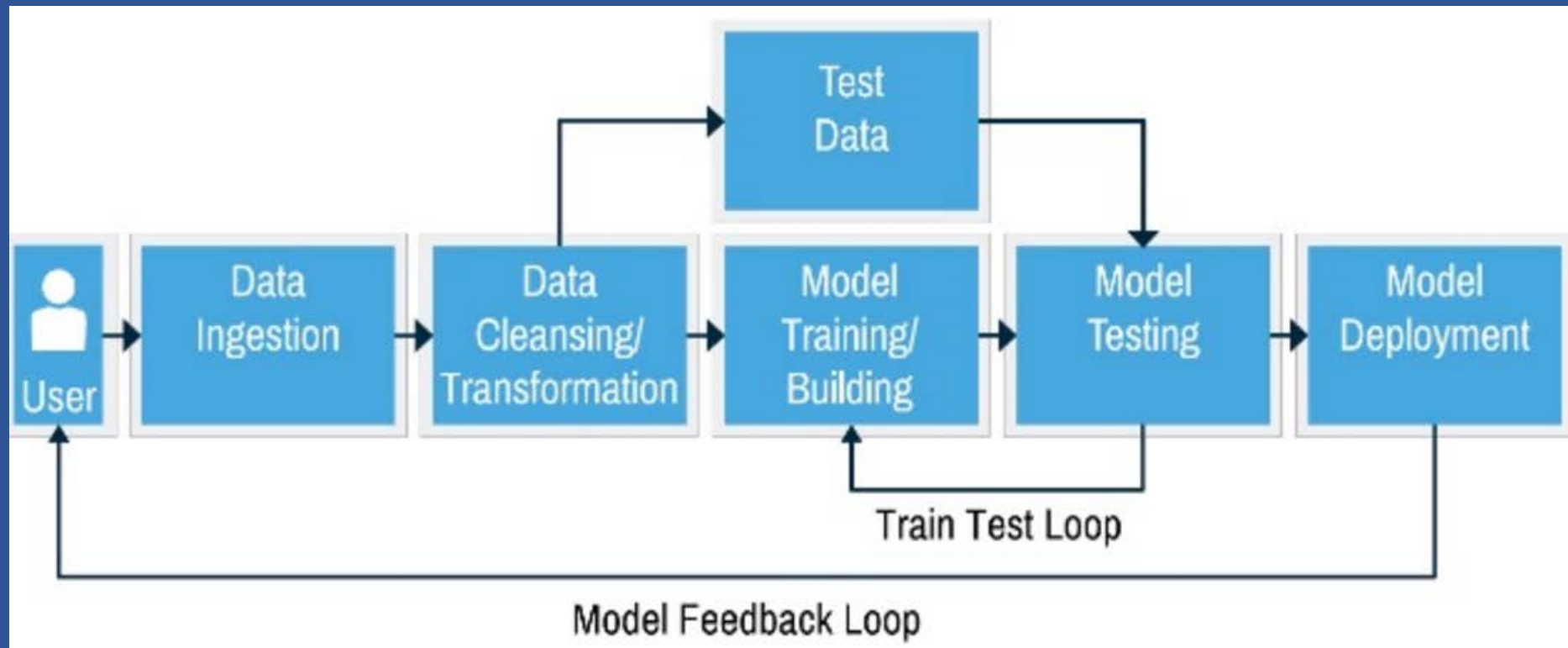
Everyday examples of predictive analytics

- Spam/junk email filters
- Mortgage applications
- Pattern recognition
- Life insurance
- Medical insurance
- Liability/property insurance
- Credit card fraud detection
- Airline flights
- Web search
- Predictive maintenance
- Health care



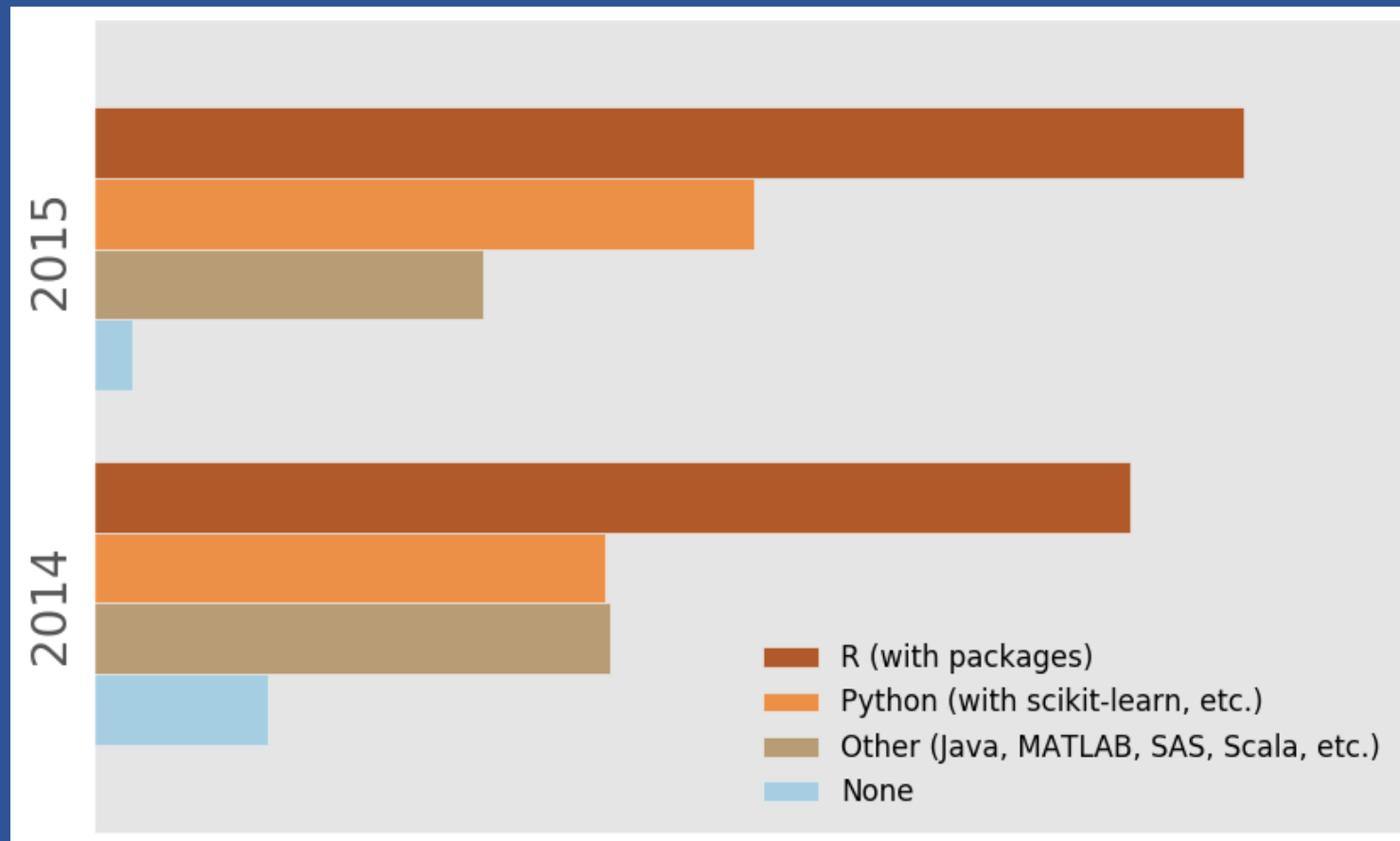
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Machine Learning work flow



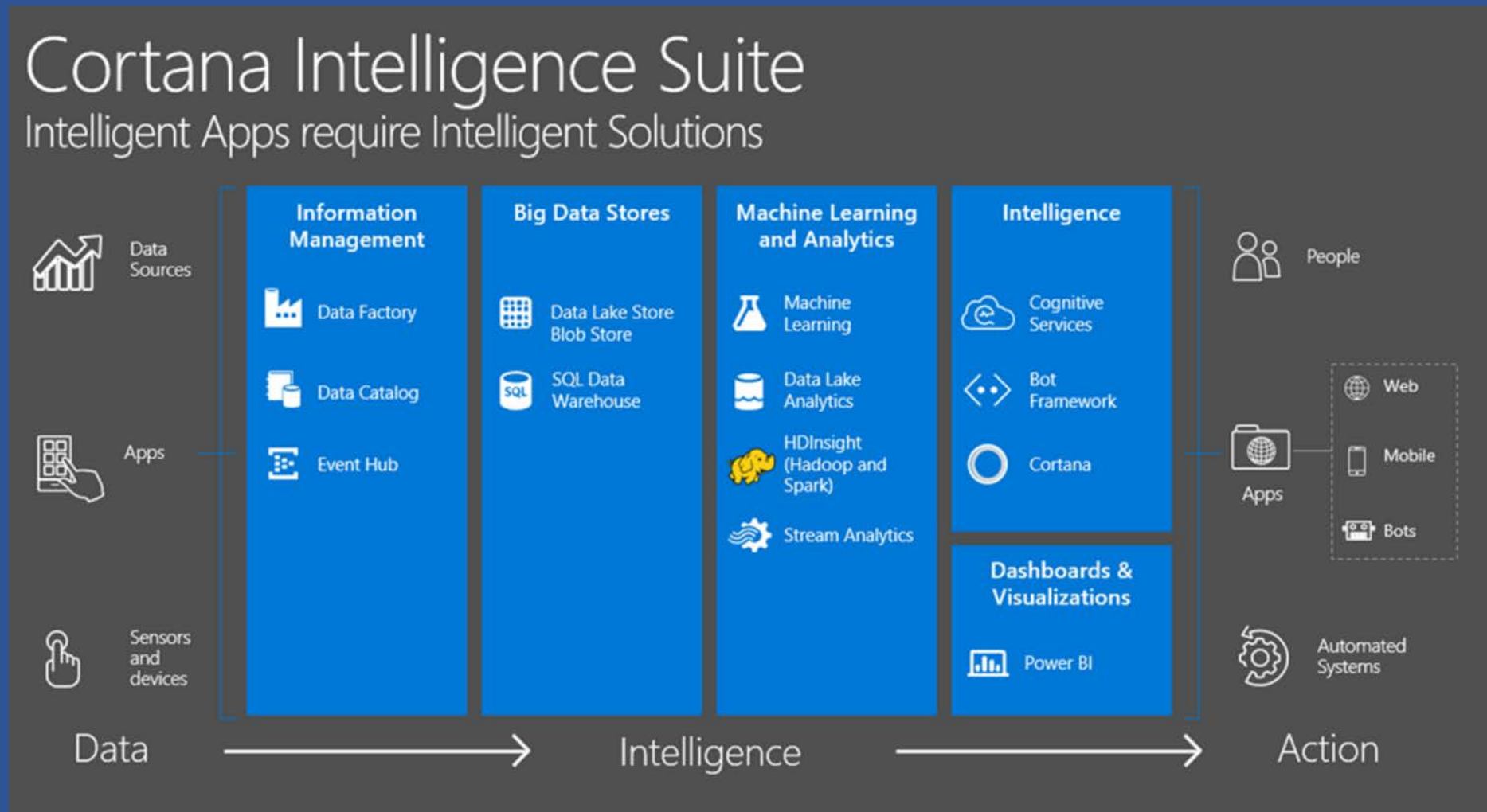
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Machine learning language



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Cortana Intelligence Suite (CIS)



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Google Machine Learning

Use your own data to train models



TensorFlow



Cloud Machine
Learning Engine

Ready to use Machine Learning models



Cloud
Vision API



Cloud
Speech API



Cloud
Jobs API



Cloud
Translation
API



Cloud Natural
Language API



Cloud Video
Intelligence API



Coming
soon

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Amazon Machine Learning

Introducing Amazon ML



Easy to use, managed machine learning service built for developers

Robust, powerful machine learning technology based on Amazon's internal systems

Create models using your data already stored in the AWS cloud

Deploy models to production in seconds



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More information

Understanding Machine Learning: From Theory to Algorithms

<http://www.cs.huji.ac.il/~shais/UnderstandingMachineLearning/copy.html>

