Microsoft
Technology
Centers

Data Literacy Workshop Series

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Philadelphia MTC
github.com/davew-msft/latent-data

Microsoft

Dave Wentzel

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Microsoft Technology Center
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Deloitte and Touche 7 years

Siemens Medical Solutions 5 years

Independent Consultant 4 years

CTO for data consultancy 2 years

Microsoft 4 years

Our People

The Architects of the MTC deliver immersive industry experiences and deep technical engagement focused on business outcomes. They help you understand the art of the possible and make it real by creating solutions to achieve business outcomes.

Architects

Todd Furst
Chief Technical Architect
Cross-workload specializing in *Azure-Infrastructure*
Industry: Retail, Healthcare

Rich Ross
Principal Technical Architect
Cross-workload specializing in *Azure-App Dev*
Industry: Healthcare, Manufacturing

Dave Wentzel
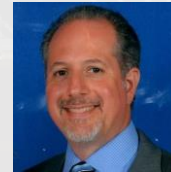*Principal Technical Architect*
Data and Analytics

Michael Mukalian
Principal Technical Architect
Cross-workload specializing in *Modern Workplace*
Industry: Financial Services, Healthcare

James Stento
Principal Technical Architect
Cross-workload specializing in *Biz Apps*
Industry: Media & Communications, Manufacturing

Why are we doing Data Literacy Workshops?

Understanding technology is less important than understanding data and having a good "Process"

- Pick the right tool for the user and use case

Self-service analytics initiatives are "underwhelming"

Your users' level of data literacy (the ability to find, work with, analyze, and "discuss" data is critical to building a self-service, *insights-driven* culture

It is my ambition to help you better integrate business analytics into the decision-making process, and brandish it for competitive advantage.

Our Process

Delivering the Right Experiences for our Customers

Envision what's possible	Immersive engagement	Aligned solutions	Business outcomes

Offerings

Design Thinking workshop
Explores the impact of digital transformation and innovation to help customers with vision-setting, strategy, roadmaps and organizational alignment.
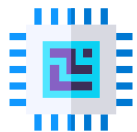
Strategy briefing
A strategic business and technical discussion to gain understanding of customer goals and challenges. Align Microsoft capabilities and solutions.

Architecture design session
Synthesizes the business and technical requirements for a solution including an initial scope and a high-level architecture to drive next steps.

Hackathon
A hands-on, intensely collaborative and inclusive sprint to determine the applicability of specific technologies against a set of business use cases.

Hands-on lab
A hands-on, immersive education experience to provide the skills and familiarity of a technology to enable solution development and adoption.

Rapid prototype
A tailored hands-on experience to demonstrate the key technical capabilities of a solution and address any challenges to accelerate decision making.

Customer Behavioral Analytics	Monday Feb 28 1-3pm EST	Without customers, your company is out-of-business. The most successful companies are using customer behavior data to make key business decisions. Many companies struggle with things like customer segmentation, loyalty, understanding Customer Lifetime Value, and "optimizing" churn. I'll bet your company has the data to tell which customers have churned and which might, but most struggle with "ok, now what do I do?" As data professionals, we are uncomfortable making opinionated recommendations on what we should do next based on what the data is telling us. In this session I'll show you how to use data and analytics processes to understand customer analytics issues and how to help your business leaders interpret their data to answer the question: "What should we do next?".
Marketing Analytics Using Demand Signal Repositories	Monday March 7 1-3pm EST	Most marketing analytics is still done in Excel. The reason is simple: Your marketing team wants to do complex analytics, but it's too cumbersome to do in your data warehouse. There's a better way. Data analysts need to be able to guide their marketing teams using Prescriptive Analytics techniques to show them "what do we do next". In this session we'll look at how to enable marketing teams to do "self-service analytics" (with the data team's guidance) by looking at real use cases like calculating Facebook campaign ROIs, performing RFM analytics, and understanding CAC (customer acquisition costs) in relation to churn, customer lifetime value, and product development. We want to show you how to build a Demand Signal Repository that goes viral inside your organization. This will be a hands-on session where we can create opinions using real data.

ETL is why Analytics Projects Fail: Here's a Better Way	Monday March 14 1-3pm EST	Traditional data projects spend a lot of time and resources copying data around the data ecosystem. This isn't fun for your data team, and it certainly doesn't add much value IF there is an alternative. In this session we'll show you some approaches to quickly acquire data sets, determine if they provide lift, and transform that data to add business value, quickly. You can leverage these techniques today to shorten time-to-value for any analytics project.
Latent Data Analytics	Monday March 21 1-3pm EST	It's likely that the most interesting data in your company is not being leveraged in your analytics. The fact is: the most valuable data your customer has is likely locked in unstructured data like Word docs and pdfs. In this session we'll show you how to crack that data and structure it to gain insights. We'll give you lots of use cases and ideas to spark your creativity.
Build the Corporate Decision Factory	Monday March 28 1-3pm EST	You've decided to be a more data-driven company. You are building data lakes, knowledge graphs, and data catalogs. You want to create better decision-making capabilities and focus less on the HOWs and more on the WHATs and WHYs but your team is spending a lot of time focusing on implementation bottlenecks that are derailing your transformation. At the Microsoft Technology Center we have concrete, repeatable processes that we've learned from helping our customers on their analytics journey. Simple questions like "how do I structure my analytics sandbox?" or "how can I store PII in a secure and compliant manner?" take months for many teams to implement. We want to share some patterns that you can use to shorten time-to-value and put your focus back on business outcomes.
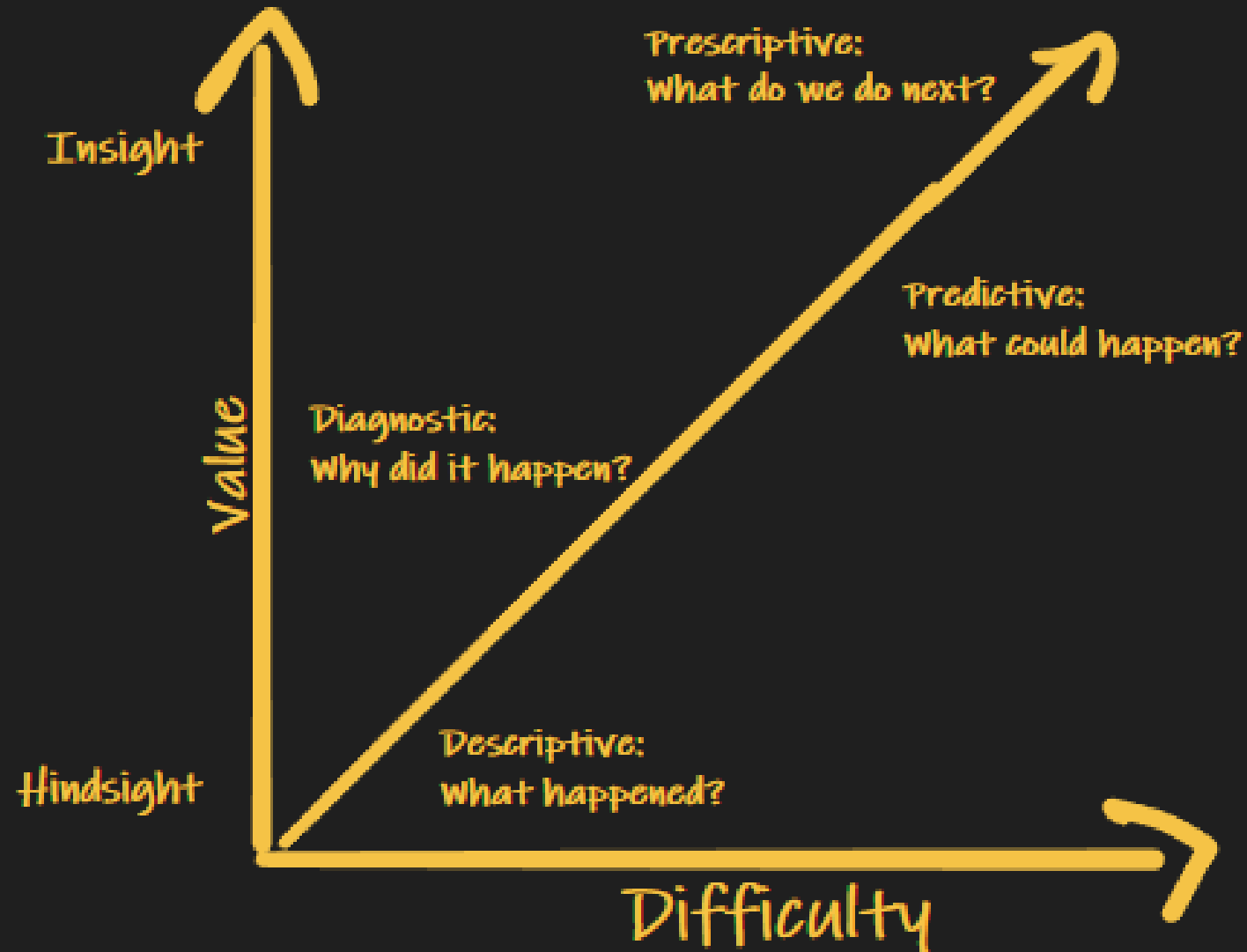
How to draw an Owl.

"A fun and creative guide for beginners"
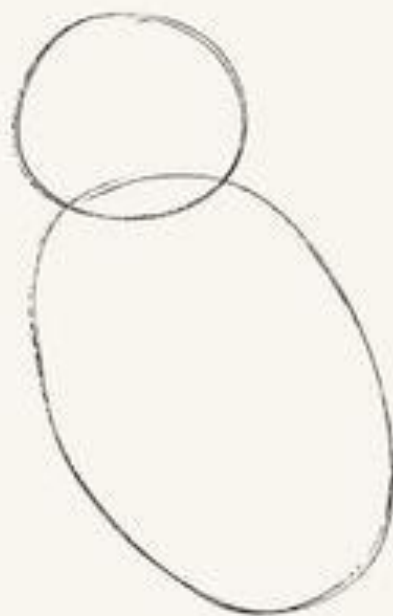
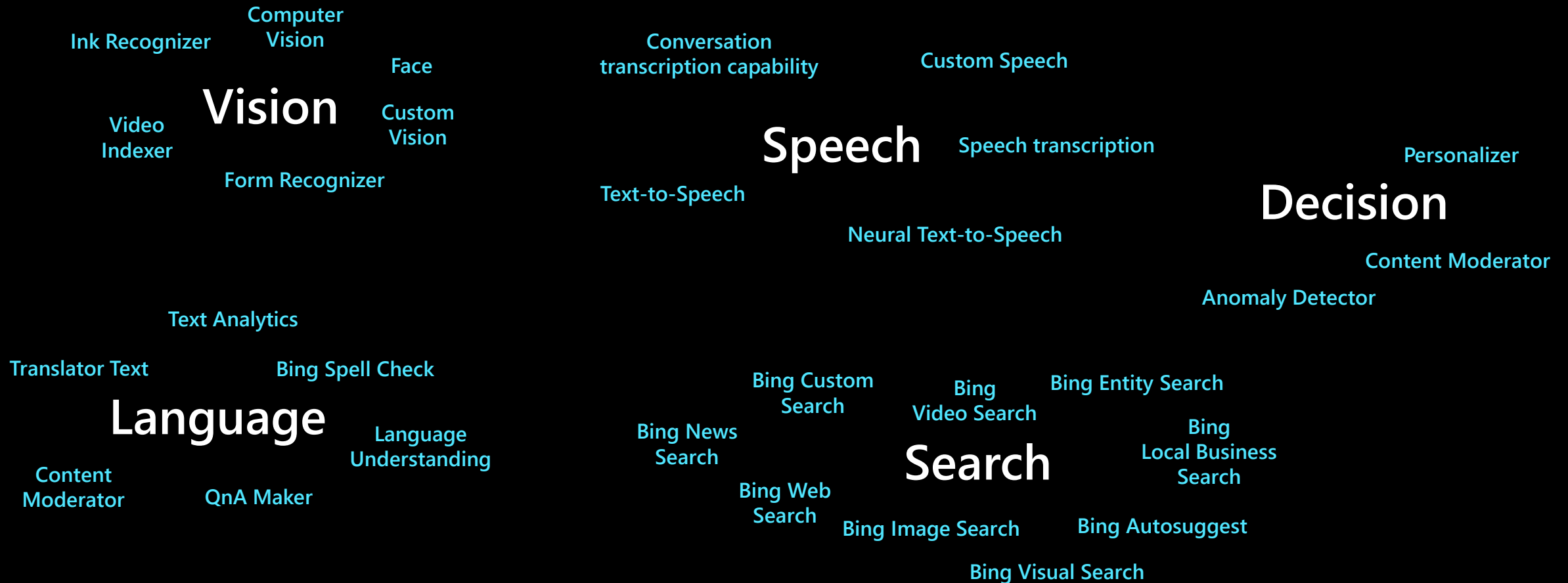Fig 1. Draw two circles   Fig 2. Draw the rest of the damn Owl

Data Literacy Workshop Series

github.com/davew-msft/latent-data

Microsoft Technology Centers

Microsoft

Azure Cognitive Services

The most comprehensive pre-trained AI

Vision

Ink Recognizer
Computer Vision
Face
Video Indexer
Custom Vision
Form Recognizer

Speech

Conversation transcription capability
Custom Speech
Speech transcription
Text-to-Speech
Neural Text-to-Speech

Decision

Personalizer
Content Moderator
Anomaly Detector

Language

Text Analytics
Translator Text
Bing Spell Check
Language Understanding
Content Moderator
QnA Maker

Search

Bing Custom Search
Bing Video Search
Bing Entity Search
Bing News Search
Bing Local Business Search
Bing Web Search
Bing Image Search
Bing Autosuggest
Bing Visual Search

What is Knowledge Mining?

Your business documents

Unlock valuable information lying latent in all your content

Azure Search

Search-as-a-Service

Every company has a search problem

Why not just use Sharepoint Search?

JPG

TIFF

HTML

Built-in Skills
in multiple languages

M/R: On 26 July Mr. Yeates of the NSA Legislative Affairs Office, with concurrence from Mr. Rudolph, D/Chief V, asked Mr. Welday, Chief T12 to effect a search of certain 1962 SIGINT product records held by the SIGINT Repository; the results of which would be used to respond to a query from Mr. Blakey in connection with the House Select Committee on Assassinations investigation into the circumstances surrounding the death of President Kennedy.

Using the guidelines described in the memo the following microfilm copy of product was searched by T1244 people.

1. QOC Series

    Reports - 3/0/QOC/R1-130
            Report #3-10, 86, 97, 110, 111 and 128 not held in Repository.

            2/0/QOC/R1-13
            Report #8 not held in Repository.

            2X/0/QOC/R1-352
            Report #48, 49, 228, 248, 266, 308 - 317 and 350 not held in Repository.
            Report #178 - 180 not readable on film (date of issue between 8 August and 20 September 1962 therefore did not recall H.C.)

    Translations -
            3/0/QOC/T1-150 Translation #99 not held in Repository.

            2/0/QOC/T1-76

            2X/0/QOC/T1-2957 Translation #1057 - 1065, 1182, 1313, 2102, 2128, and 2250 not held in Repository.

2. QOY Series

    Reports - 3/0/QOY/R1-11 Report #3, 8, and 10 not held in Repository.

            2/0/QOY/R1

            2X/0/QOY/R1 Report #11 not held in Repository.

    Translations -
            3/0/QOY/T1-50

            2/0/QOY/T2 Translation #1 not held in Repository.

            2X/0/QOY/T1-519 Translation #42-45, 97, 177, 253, 260, 261, and 434 not held in Repository. Translations 500-507 not readable on film (date of issue Oct 1962, therefore did not recall H.C.)

3. QOF Series

    Reports - 3/0/QOF/R1-39

            2/0/QOF/R1-225

At a high level...

INGEST

ENRICH

EXPLORE

101010
010101
101010

Data in any
format, any
Azure store

Cognitive skills

Explore

Annotations

Knowledge mining with Azure Search

Information

Cutting-edge AI

Fully text-searchable rich index

Form 5471

Key Phrase extraction

Location entity extraction

Sentiment analysis

Organization entity extraction

Persons entity extraction

Language detection

Face detection

Celebrity recognition

Tag extraction

Custom skills

Landmark detection

Printed text recognition

Azure Search
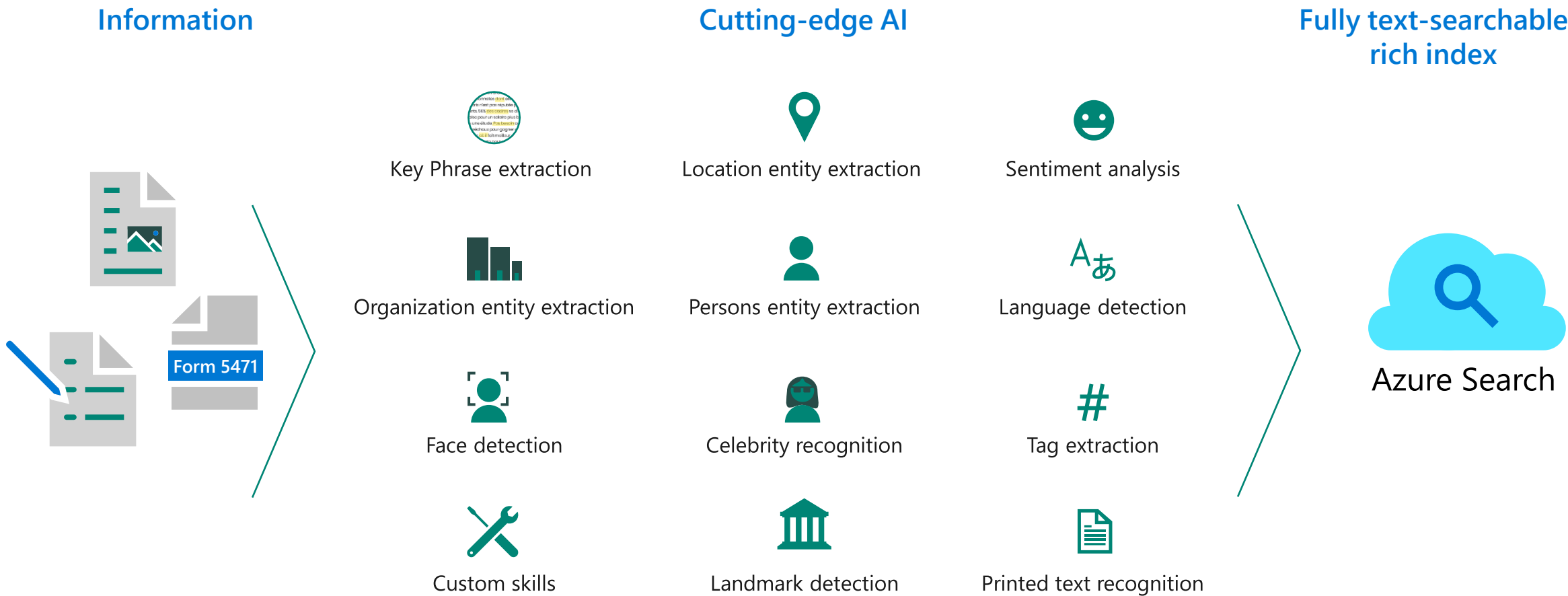
Cognitive skills

Built-in skills

Key Phrase extraction

Location entity extraction

Sentiment analysis

Organization entity extraction

Persons entity extraction

Language detection

Face detection

Celebrity recognition

Image tag extraction

Text Utilities

Landmark detection

Printed text recognition

Custom skills

Your custom skill goes here!
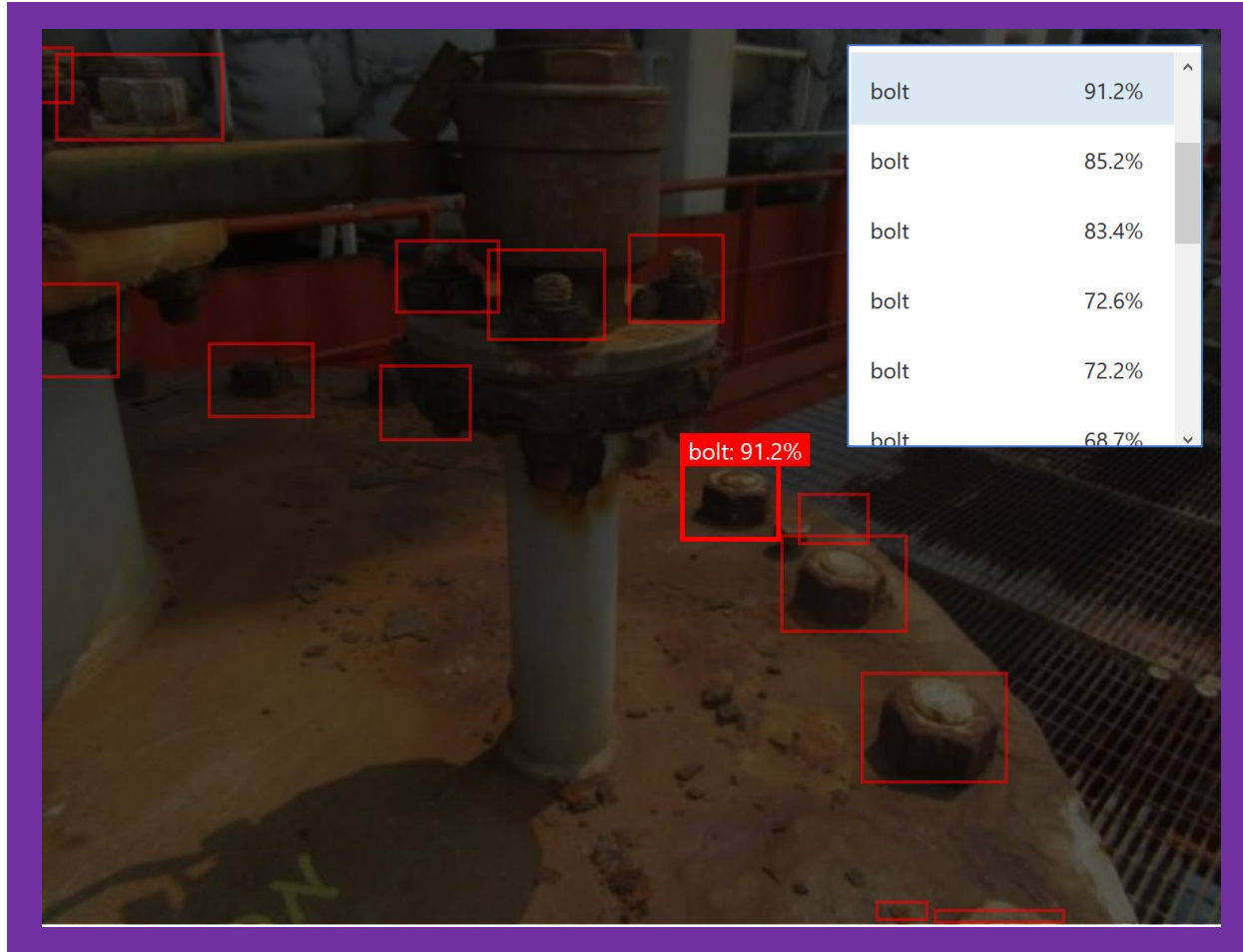
Azure Databricks

Azure Machine Learning

Machine Learning VMs

Object Detection Common Scenarios

- Object counting

- Locate an object or a group of objects

- Size / measurements

Face

Face detection

Detect faces and their attributes within an image

Face verification

Check if two faces belong to the same person

Similar face searching

Find similar faces within a set of images

Face grouping

Organize many faces into groups

Face identification

Search which person a face belongs to

Custom Vision

A customizable web service that learns to recognize specific content in imagery

Upload images

Upload your own labeled images, or use Custom Vision Service to quickly tag any unlabeled images
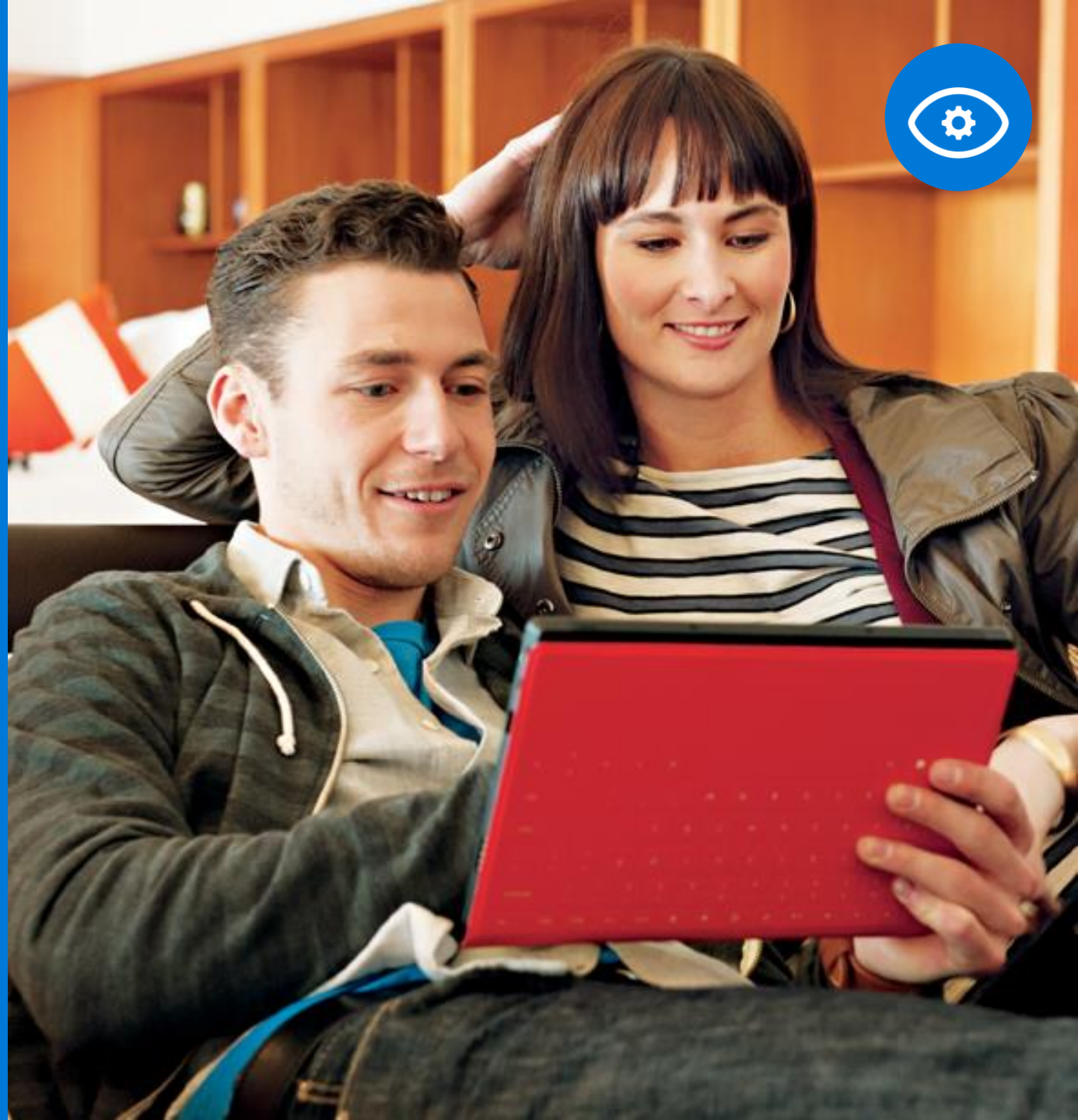
Train

Use your labeled images to teach Custom Vision Service the concepts you want it to learn

Evaluate

Use simple REST API calls to quickly tag images with your new custom computer vision model

Active learning

Images evaluated through your custom vision model become part of a feedback loop you can use to keep improving your classifier

Video Indexer
Unlock video insights

Upload your video and go

Start turning your video into insights right away.

Make your content more discoverable

Enhance content discovery experiences such as search results by detecting spoken words, faces, characters, and emotions

Improve engagement with your video

Metadata extracted by Video Indexer can be used to build powerful engagement experiences with recommendations, highlight clips, and interactive videos

Confusion Matrix