

A complex network diagram with nodes of various sizes (small, medium, large) and colors (red, dark blue, grey) connected by thin lines. The nodes are distributed across the entire frame, creating a dense web of connections. A semi-transparent blue rectangular box is overlaid on the right side of the image, containing the title and subtitle text.

# AI for the better (life of PWD)

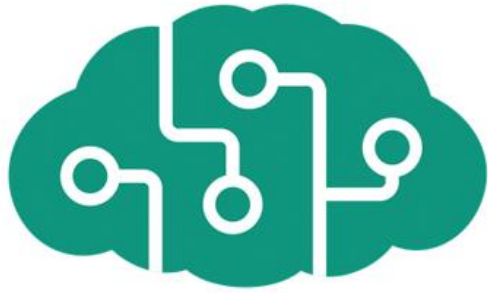
Dennie Declercq // Global AI Community  
Pune 2021



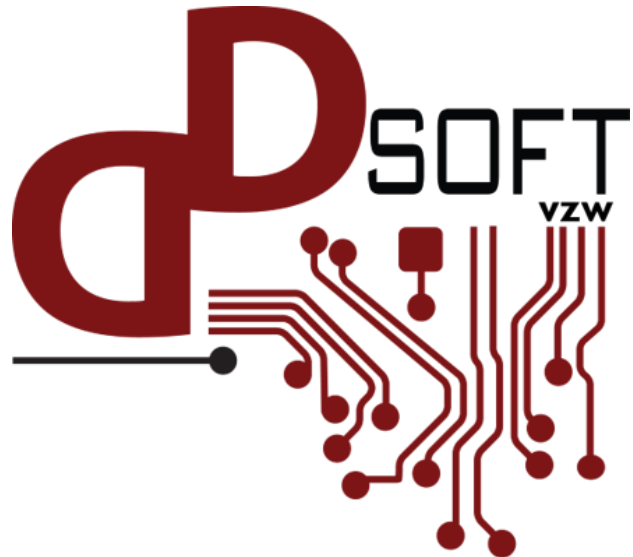
# Hi, My name is!

- Dennie Declercq
- @DennieDeclercq
- #DreamingIsBelieving
- President & Developer DDSOFT





 Microsoft  
Cognitive Services



And I am NOT an AI  
engineer



# Content

- Primer into Accessibility
- Microsoft Cognitive Services API overview
- Real world problems
- The real inspiration
- Real world inspiration
- AI For Good
- Inspirational trigger
- How to get started?
- Wrap up
- Thanks || Q&A

# PRIMER INTO ACCESSIBILITY



# Kind of disabilities



Learning  
disability



Autism



Visual



Auditory



Motoric



Much more...

Learning disability?

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Significant limitations in both:

- Intellectual functioning
- Adaptive behavior

# Learning Disability

## Intellectual Functioning

Also called intelligence

Mental capacity

IQ score between 70-75

## Adaptive Behavior

### Conceptual Skills

- Language/literacy
- Money
- Time/numbers

### Social Skills

- Social responsibility
- Self-esteem

### Practical skills

- Activities daily living
- Personal care / healthcare





## Principles of Inclusion

- Same activities
- Same district
- Work Together
- Adjustments par person

# Digital Difficulties for PWD.

## Learning Disability

- Read
- Understand

## Autism

- Understand
- See structure

## Blindness or vision loss

- Decreased ability to read
- Decreased ability to navigate

## Auditory disabilities

- Hearing notifications
- Following movies without audio description.



## Our Focus






















- People with Learning disabilities
- Autism
- People with mental health situations

# MICROSOFT COGNITIVE SERVICES API'S



# GETTING STARTED WITH COGNITIVE SERVICES

AI + Machine Learning > Cognitive Services

 <b>Bing Autosuggest</b> Microsoft Help users complete queries faster by adding intelligent type-ahead capabilities	 <b>Bing Custom Search</b> Microsoft Create a custom search engine with ad-free results	 <b>Bing Entity Search</b> Microsoft Recognize and classify named entities, and find search results based on them	 <b>Bing Search</b> Microsoft Enable safe, ad-free search for your users with Bing, a leading search engine	 <b>Bing Spell Check</b> Microsoft Help users identify and fix word breaks, slang, names, homonyms, and brands	 <b>Computer Vision</b> Microsoft An AI service that analyzes content in images	 <b>Content Moderator</b> Microsoft An AI service that detects unwanted content
 <b>Custom Vision</b> Microsoft An AI service and end-to-end platform for applying computer vision to your specific scenario	 <b>Face</b> Microsoft An AI service that analyzes faces in images	 <b>Speaker Recognition</b> Microsoft An AI service that enables you to identify individual speakers or use speech as a means of verification	 <b>Speech</b> Microsoft An AI service that enables you to embed human-like speech capabilities into your apps	 <b>QnA Maker</b> Microsoft An AI service that enables you to create a bot from your data in minutes	 <b>Text Analytics</b> Microsoft An AI service that enables you to unlock insights from natural language text using sentiment	 <b>Translator Text</b> Microsoft An AI service that enables you to easily translate text between more than 60 languages
 <b>Personalizer</b> Microsoft An AI service that delivers a personalized user experience	 <b>Language Understanding</b> Microsoft Teach your apps to understand commands from your users	 <b>Ink Recognizer (Preview)</b> Microsoft An AI service that recognizes digital ink content, such as handwriting, shapes, and document layout	 <b>Immersive Reader (preview)</b> Microsoft An AI service that helps users read and comprehend text	 <b>Form Recognizer (preview)</b> Microsoft The AI service that extracts information from documents	 <b>Anomaly Detector (preview)</b> Microsoft An AI service that helps you foresee problems before they occur	 <b>Cognitive Services</b> Microsoft Connect powerful AI to your apps





# DEMO: Creating a Cognitive Service on Azure

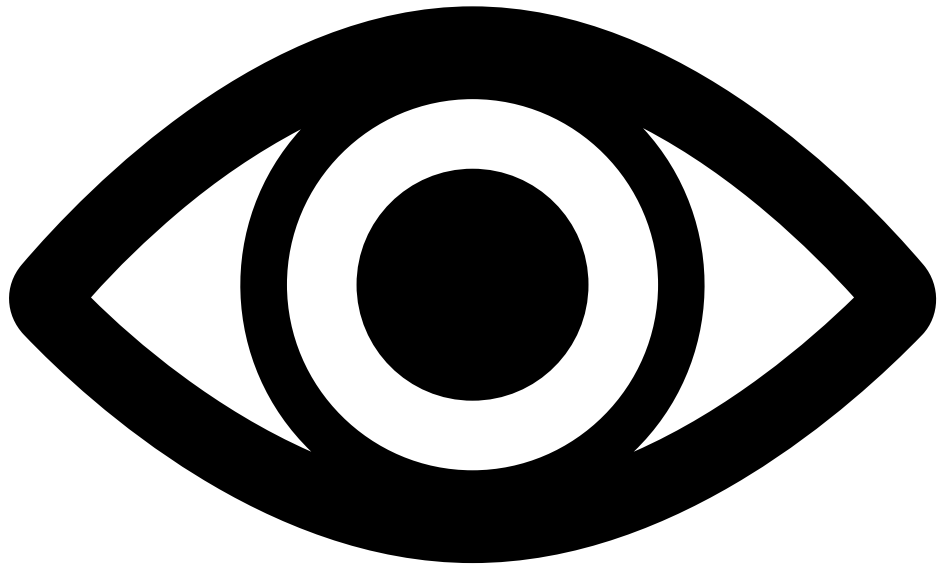


# Speech Service

- Text-to-speech
- Custom Voice

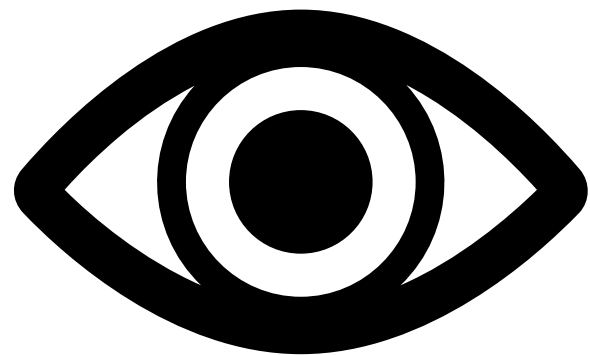


DEMO: Speech API



# Vision API

- Analyzes images
- Let PWD take pictures and tells what it is.



# Face API

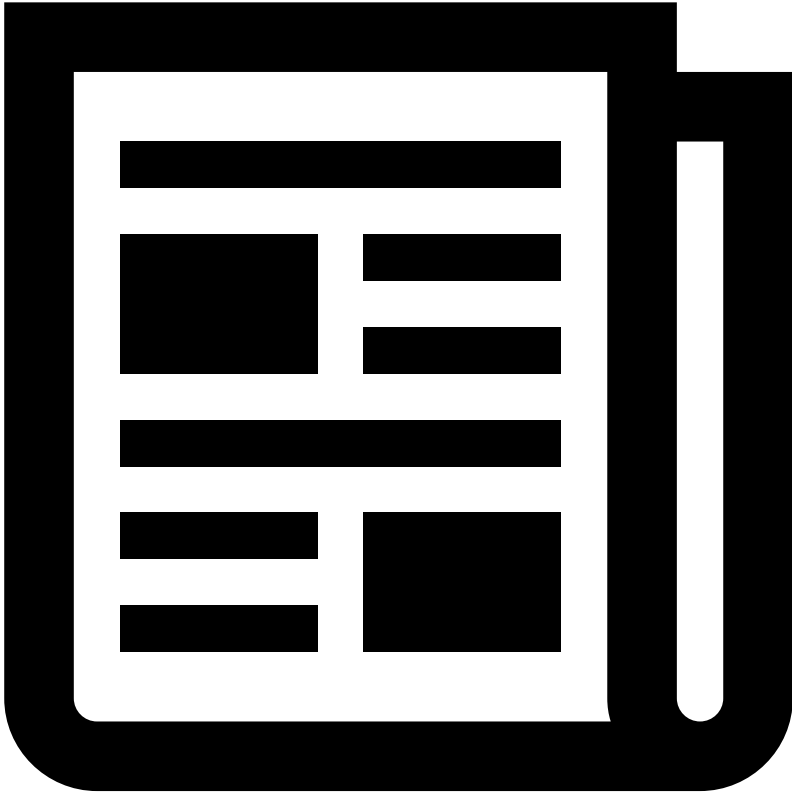
- Detect Emotion
- Detect Facial Hair
- Detect Smile
- Detect Age





# BOT Service

- Provide BOTs
- BOTs really can assist PWD
- Make clear guidelines



# Immersive Reader

- Accessibility features like:
  - Reading aloud websites
  - Linking pictographs to websites
  - Text appearance options



# Translator Service

- Translation
- Language Detection



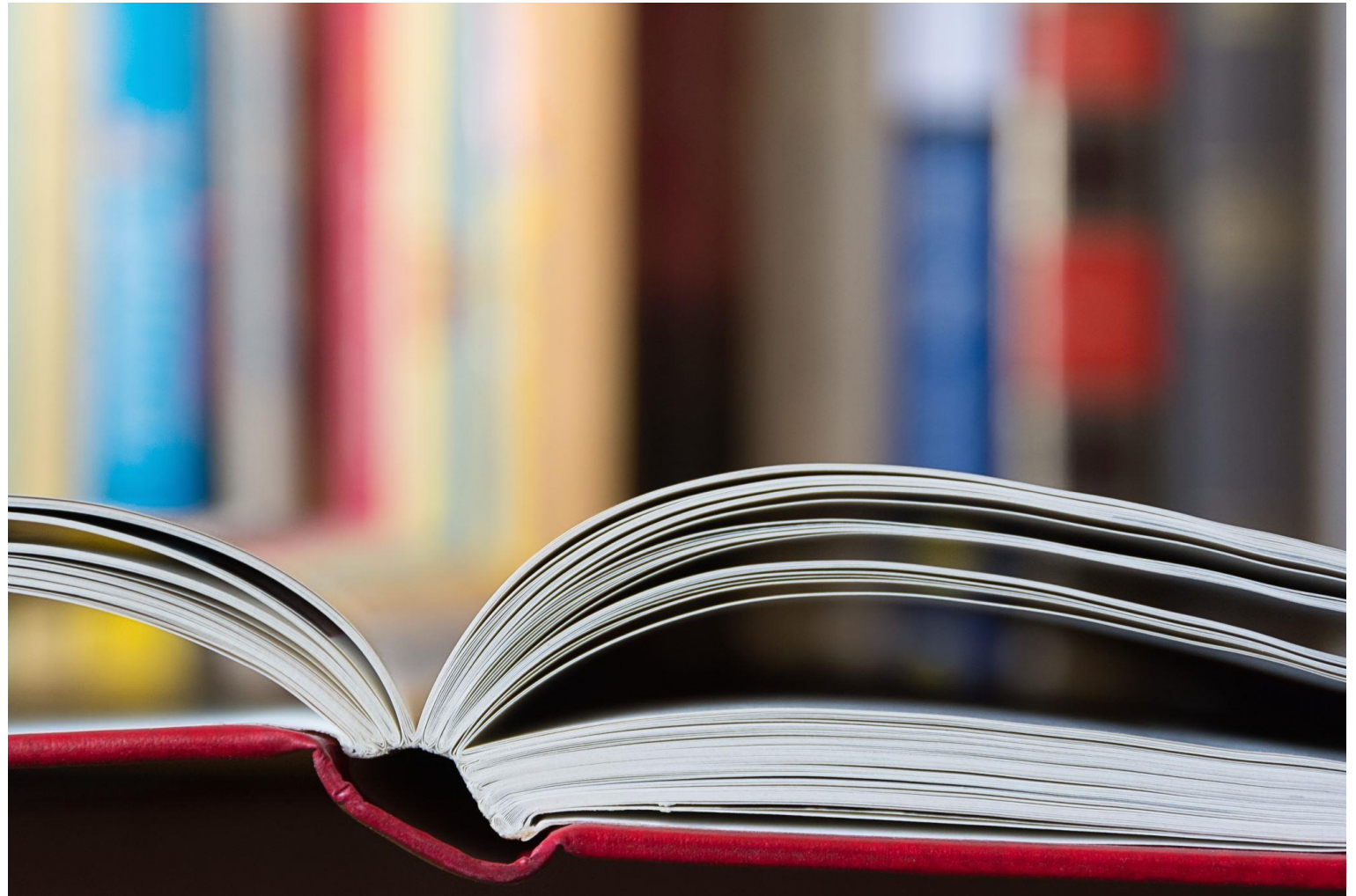
DEMO: Translator API

# PROBLEMS



# Literacy

- Reading information
- Understanding written text
- Recognizing money
- Math



# Executive Functions

- Planning  
‘simple’ tasks
- Making choices
- Concentration



# ‘FEELING’

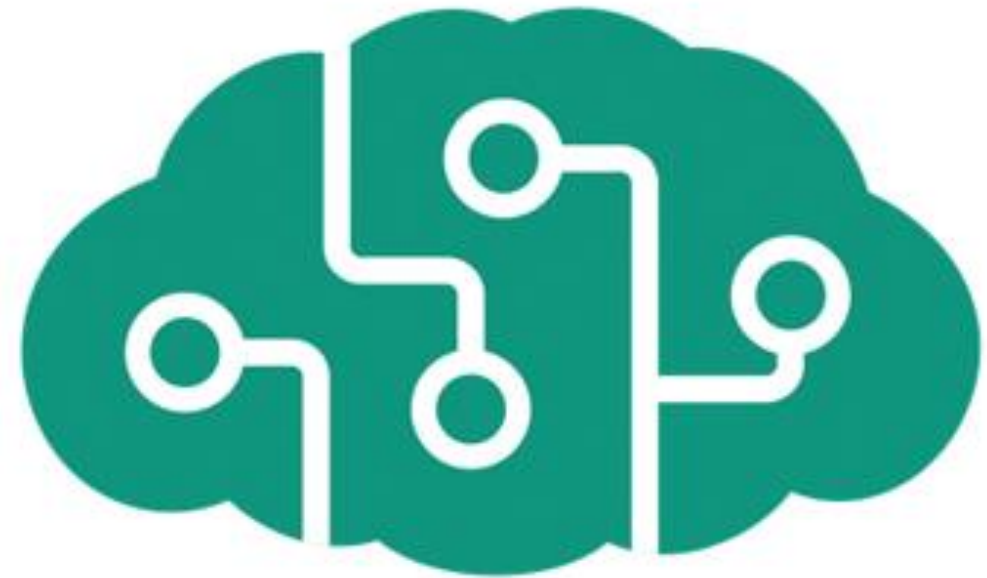
“I have no elbows, I don’t feel if I am going over your borders, and if this annoys you” -Dennie Declercq

# Self-trust

- Self-trust can be hard
- Can I really do this?
- Will this really work?



AS YOU  
SEE...



 Microsoft  
Cognitive Services

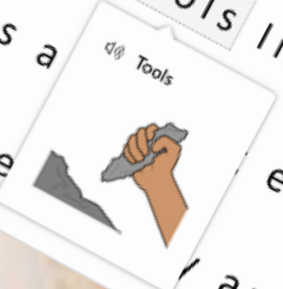


# THE REAL INSPIRATION

The image features a dark gray rectangular background with a thin white border. Centered on the left side of the background is the text "THE REAL INSPIRATION" in a white, all-caps serif font. The text is arranged in two lines: "THE REAL" on the top line and "INSPIRATION" on the bottom line. To the right of the text, there is a thin, vertical white line that extends from the top of the text area to the bottom, creating a visual separation between the text and the empty space on the right.



<sup>n.</sup> Learning <sup>n.</sup> Tools <sup>adj.</sup> Immersive <sup>n.</sup> Reader  
<sup>v.</sup> creates a <sup>n.</sup> reading experience that  
<sup>v.</sup> adds <sup>n.</sup> accessibility and

Learning <sup>n.</sup> Tools <sup>adj.</sup> Immersive <sup>n.</sup> Reader  
creates a <sup>n.</sup> reading experience that  
adds acce  and



## The Immersive Recipe



# My vision barber

Custom Vision

Face API

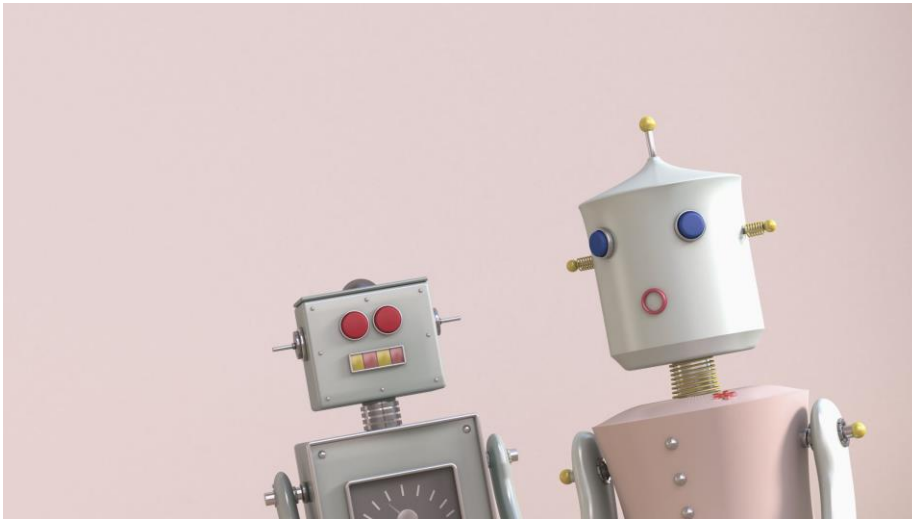
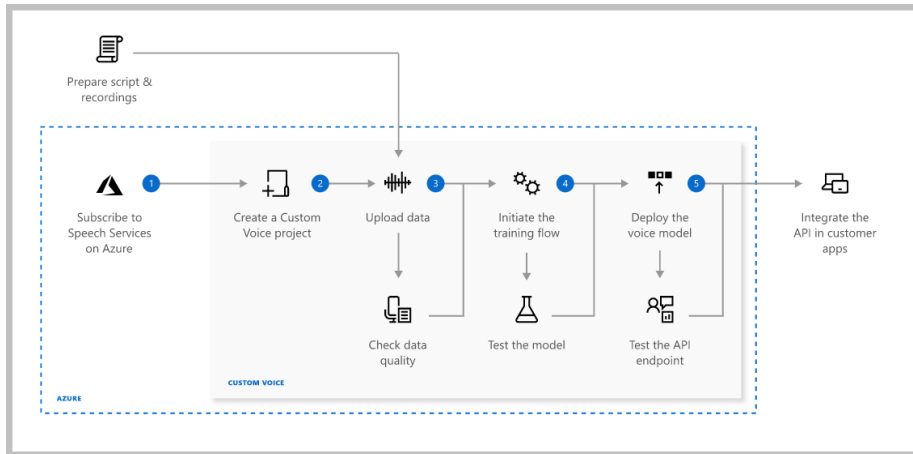
```
[Newtonsoft.Json.JsonProperty(PropertyName="beard")]  
public double Beard { get; set; }
```

# My Artificial Mom

Text To Speech

BOT Service

Custom voice





# The AI wardrobe

Graph API

Computer Vision

# REAL WORLD INSPIRATION

A thin, vertical white line is positioned to the right of the text, extending from the top of the word 'INSPIRATION' to the top of the word 'REAL'.





MICROSOFT SEEING AI  
<https://go.ddsoft.be/msftseeingai>



**MICROSOFT TRANSLATOR**  
<https://go.ddsoft.be/msfttranslator>



HELPICTO  
<https://go.ddsoft.be/helpicto>

People can add  
images or adjust  
content as needed



THANK YOU POWERPOINT!  
[HTTPS://GO.DDSOFT.BE/AIPPT](https://go.ddssoft.be/aippt)

A man with short brown hair and a beard, wearing a black t-shirt, is sitting at a long wooden table in a modern office. He is looking down at a laptop in front of him. On the table, there is also a black backpack, a clear plastic cup with a straw, and a black can. The background shows large windows with a view of a city and a wall with a colorful polka-dot pattern.

## AI for Accessibility grants

Empower your work through grants, investments of technology, and expertise.

Apply for a grant >

<https://go.ddsoft.be/msftai>

CALL: AI FOR ACCESSIBILITY





# DEMO: (extra) inspirational Trigger

*“The Future of Web Accessibility”*



Research	In accessibility / People with disabilities
Learn	Microsoft Cognitive Services
Get	Further inspired
Play	With existing tools

Getting  
started

WRAP UP

# Links & References

- Microsoft Seeing AI: <https://go.ddsoft.be/msftseeingai>
- Helpicto: <https://go.ddsoft.be/helpicto>
- Microsoft Translator movie: <https://go.ddsoft.be/msfttranslator>
- AI in PowerPoint: <https://go.ddsoft.be/aippt>
- Microsoft AI for Good: <https://go.ddsoft.be/msftai>
- Demo: 'TextHelp' on GitHub: <https://go.ddsoft.be/texthelp>



# Thanks! | | Q&A

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- @DennieDeclercq
- #DreamingIsBelieving