

Liberate Your Data with Visualisation and Conversation!



<https://www.meetup.com/Citizen/events/267949651/>

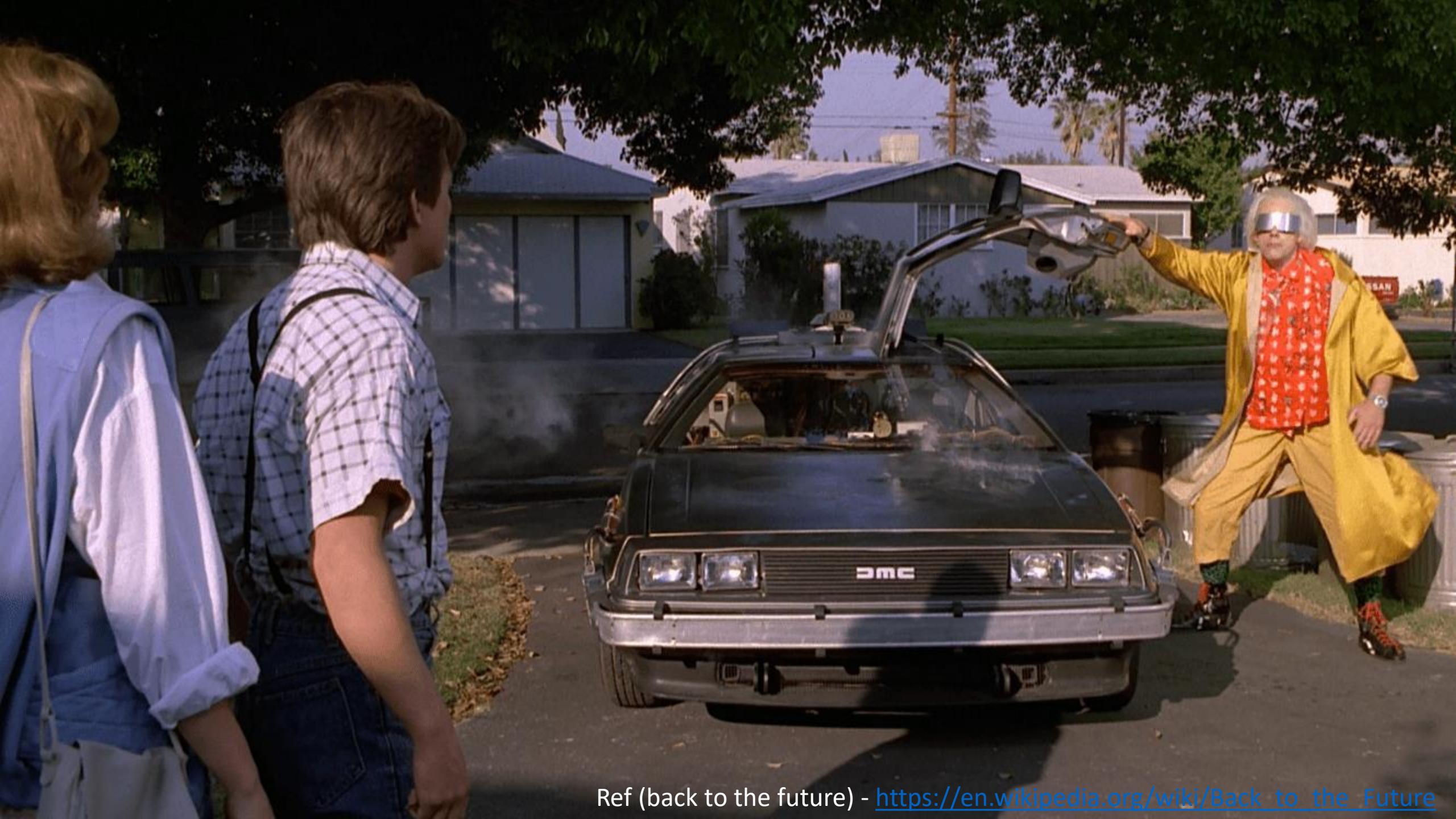
Rolf Tesmer

Azure Cloud Architect | Analytics | Data | AI | Other Stuff

Microsoft Australia

<https://www.linkedin.com/in/rolftesmer/>

<https://mrfoxsql.wordpress.com/>



Ref (back to the future) - https://en.wikipedia.org/wiki/Back_to_the_Future

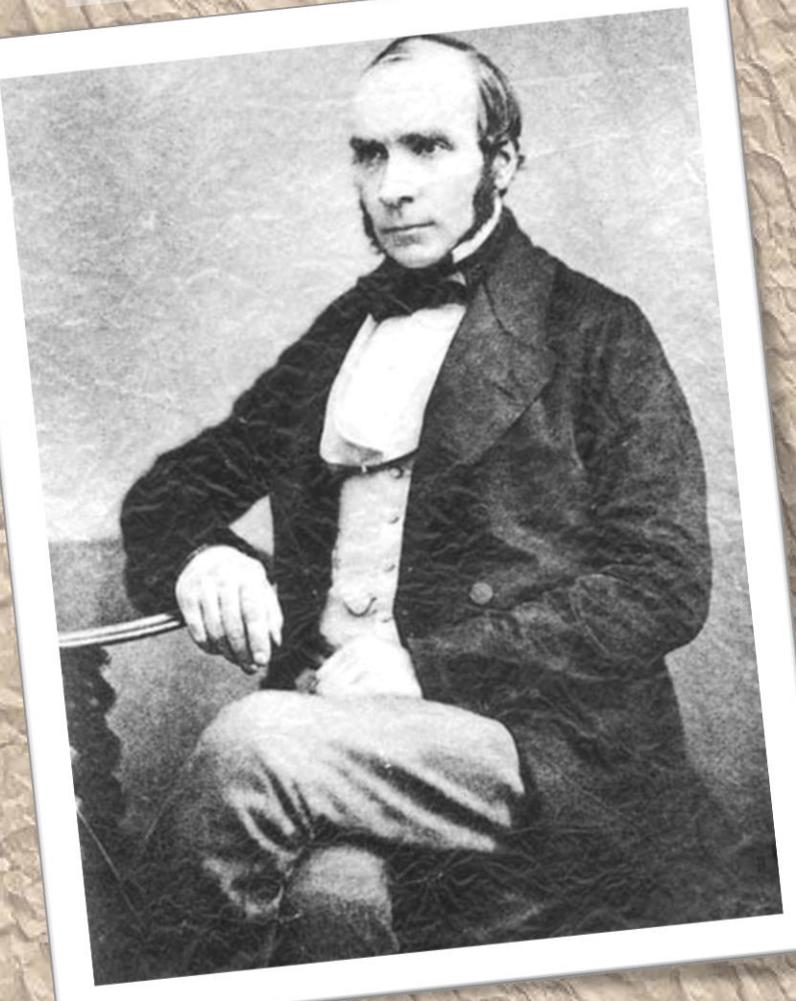
So let's go back in time... about 165 years...

It's the year 1854
Soho District,
London, England.

1846–1860 worldwide cholera pandemic
1854 Broad Street Cholera Outbreak



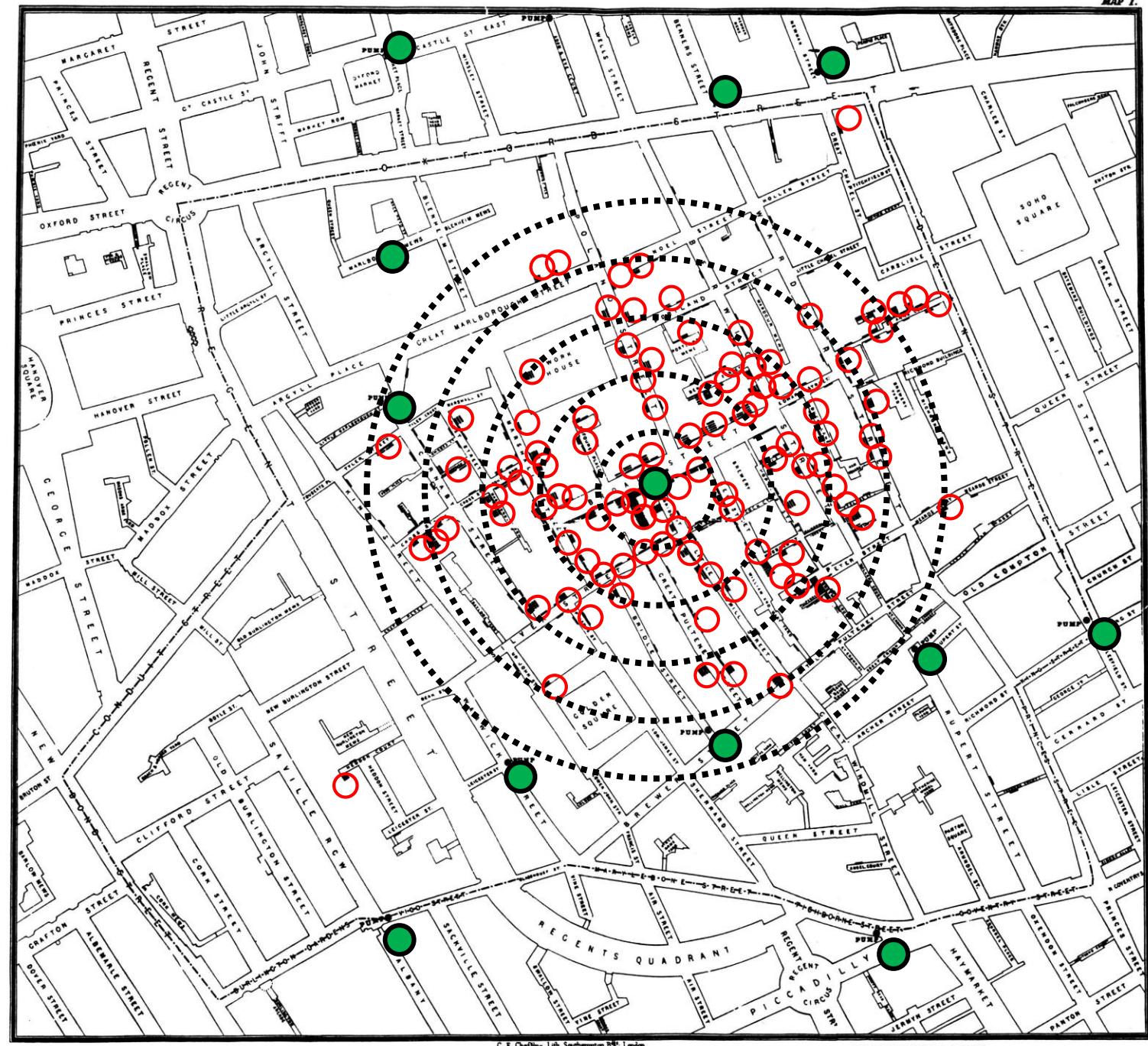
John Snow

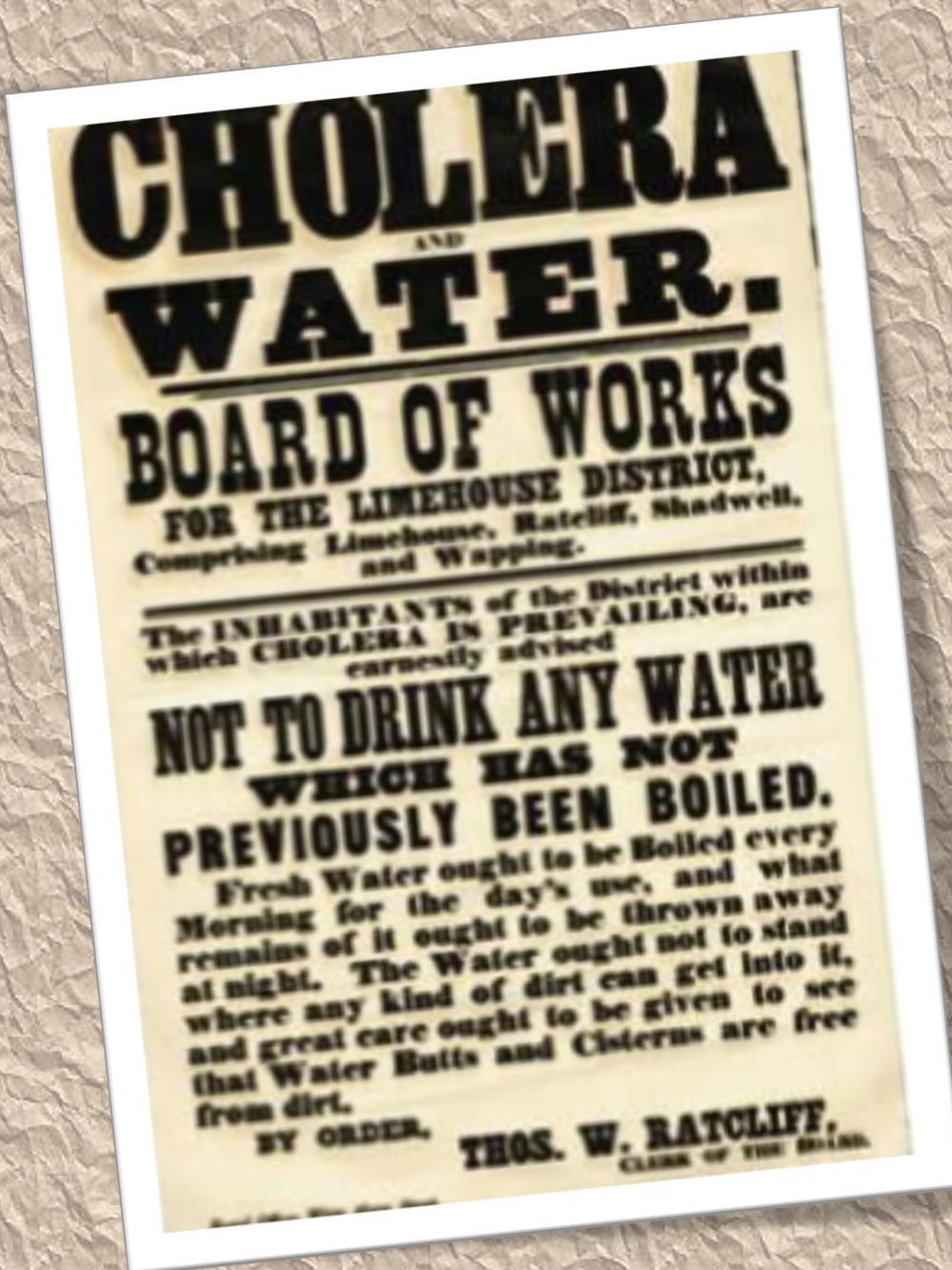


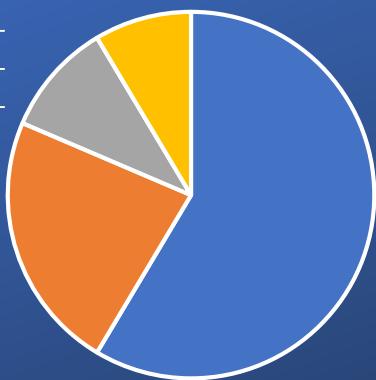
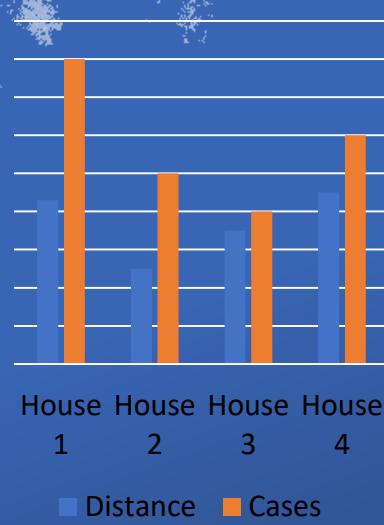
https://en.wikipedia.org/wiki/Blinded_experiment

https://en.wikipedia.org/wiki/John_Snow

https://en.wikipedia.org/wiki/1854_Broad_Street_cholera_outbreak







■ 1st Qtr ■ 2nd Qtr
■ 3rd Qtr ■ 4th Qtr

*“People will forget what you said,
They will forget what you did,
but they will never forget
how you made them feel.”*

Maya Angelou

5 Ways to Craft Impactful Data Stories

1. Know your **Data**
2. Know your **Audience**
3. Highlight the **Message**, dull the **Noise**
4. Select the **Right Medium** for the
Data & Audience & Message
5. **Practice ^ 3, don't leave it to chance**



Ref (back to the future) - https://en.wikipedia.org/wiki/Back_to_the_Future

What is Azure?

Build, manage and deploy applications on a massive global network

<https://azure.microsoft.com/en-au/global-infrastructure/>

90+

Compliance
Certifications



Quincy, WA

https://en.wikipedia.org/wiki/Columbia_Data_Center
74,000m² of floor space
(~50% the size of Westfield Shopping Centre, Sydney)
Employees = 50





Boydton, VA
102,000m²



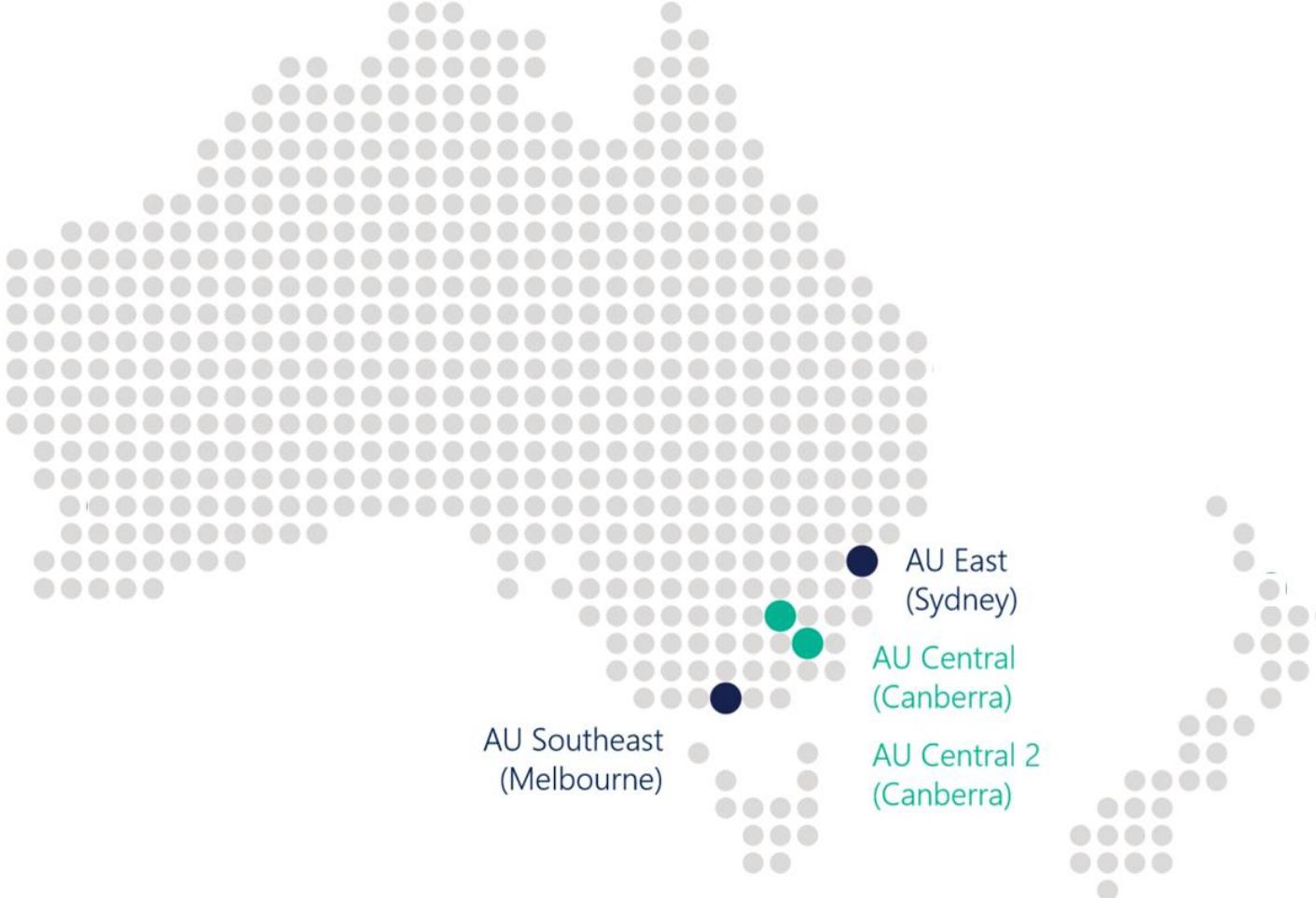
Amsterdam

...and what else are we doing in sustainability?

<https://blogs.microsoft.com/blog/2020/01/16/microsoft-will-be-carbon-negative-by-2030/>



Microsoft Azure in Australia



First Launched October 27th 2014 (Sydney & Melbourne)

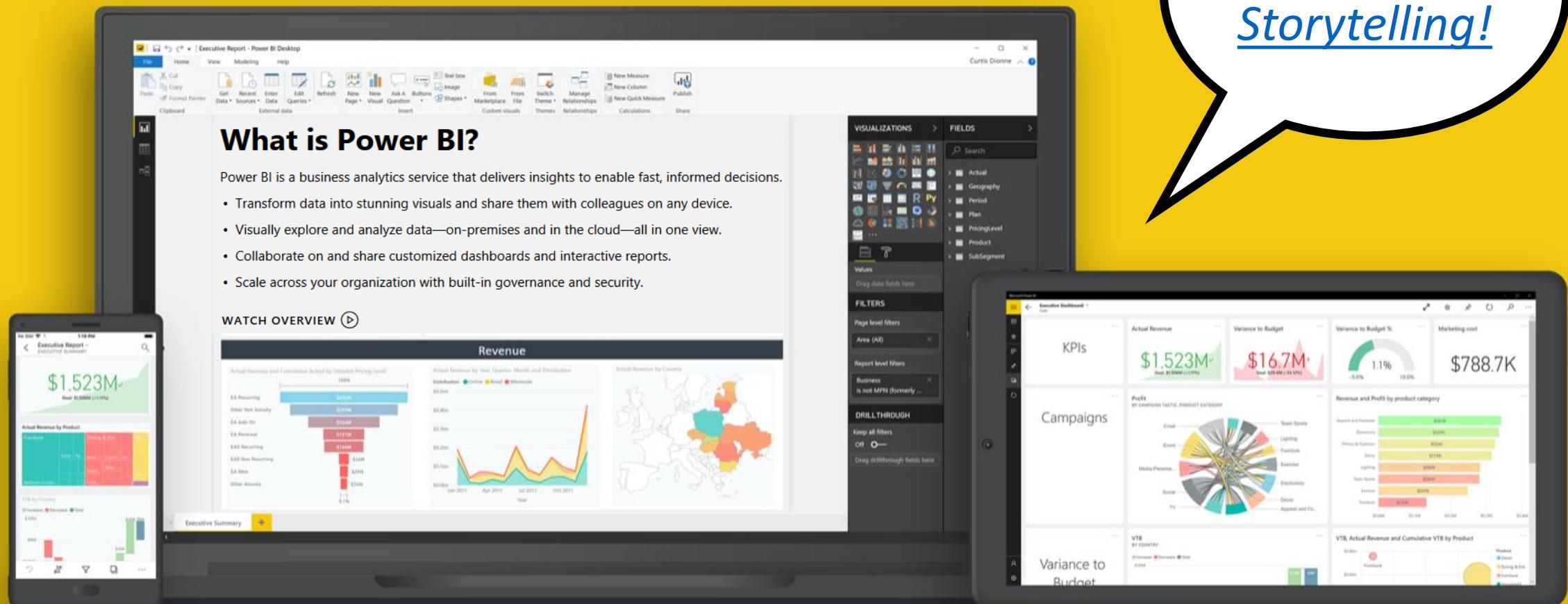
AU Central regions launched April 2018 (CDC Partnership)

- SCEC Zone 3 & 4 Accredited
- Government Critical Infrastructure
- Classified Data Certification

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*Try me
here!*

<https://aka.ms/mupbi>



So, what exactly is a "Bot"?

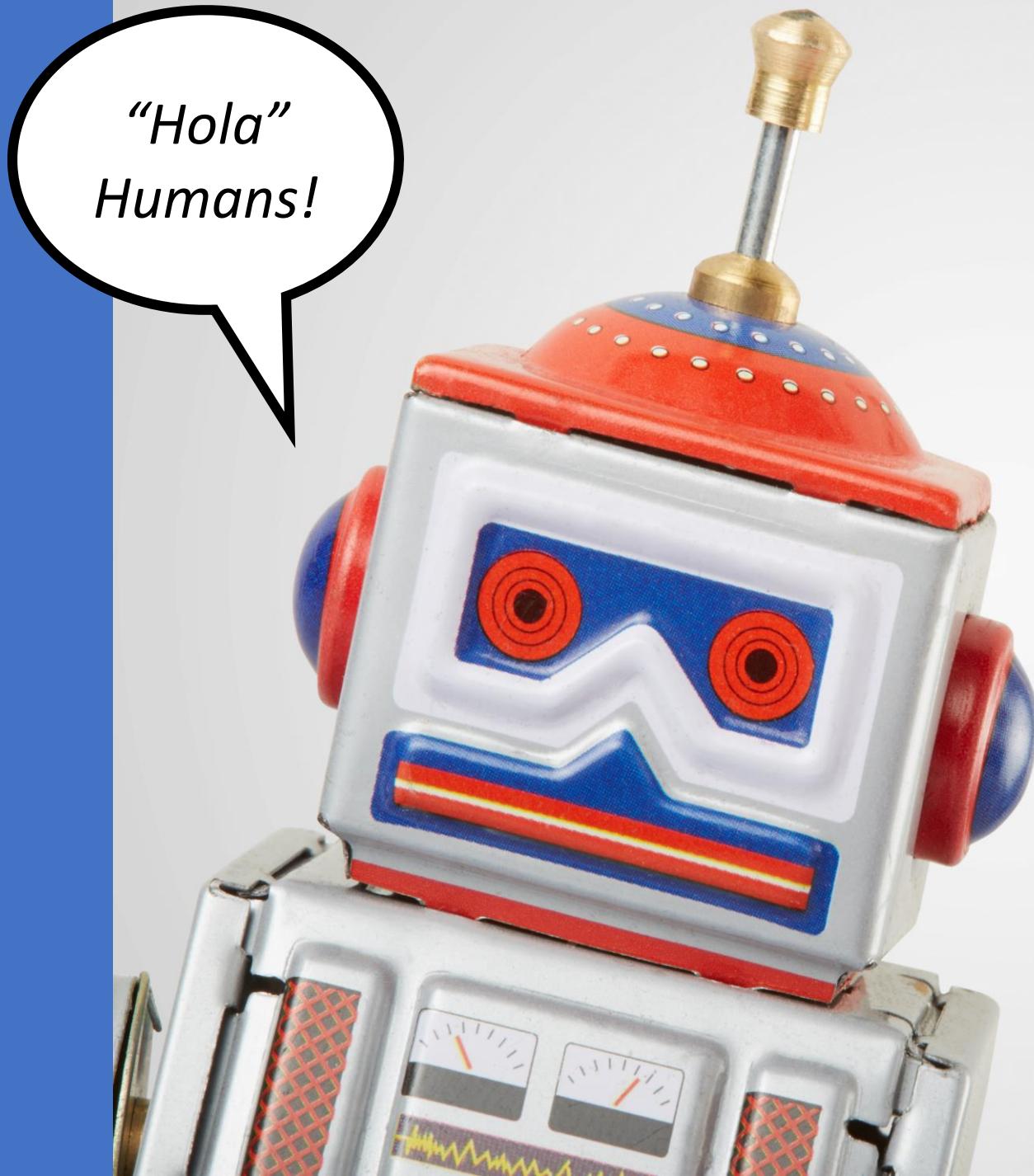
Also known as Intelligent Agent/Assistant.

An application that performs one or more **automated** tasks.

Bots can use forms of **conversation** as one of the interfaces/channels.

Bots are often **infused with AI** to make these conversations more fluent and engaging for humans.

They help solve problems, and they can do it **asynchronously**.



THEN: Bots have come a long way...

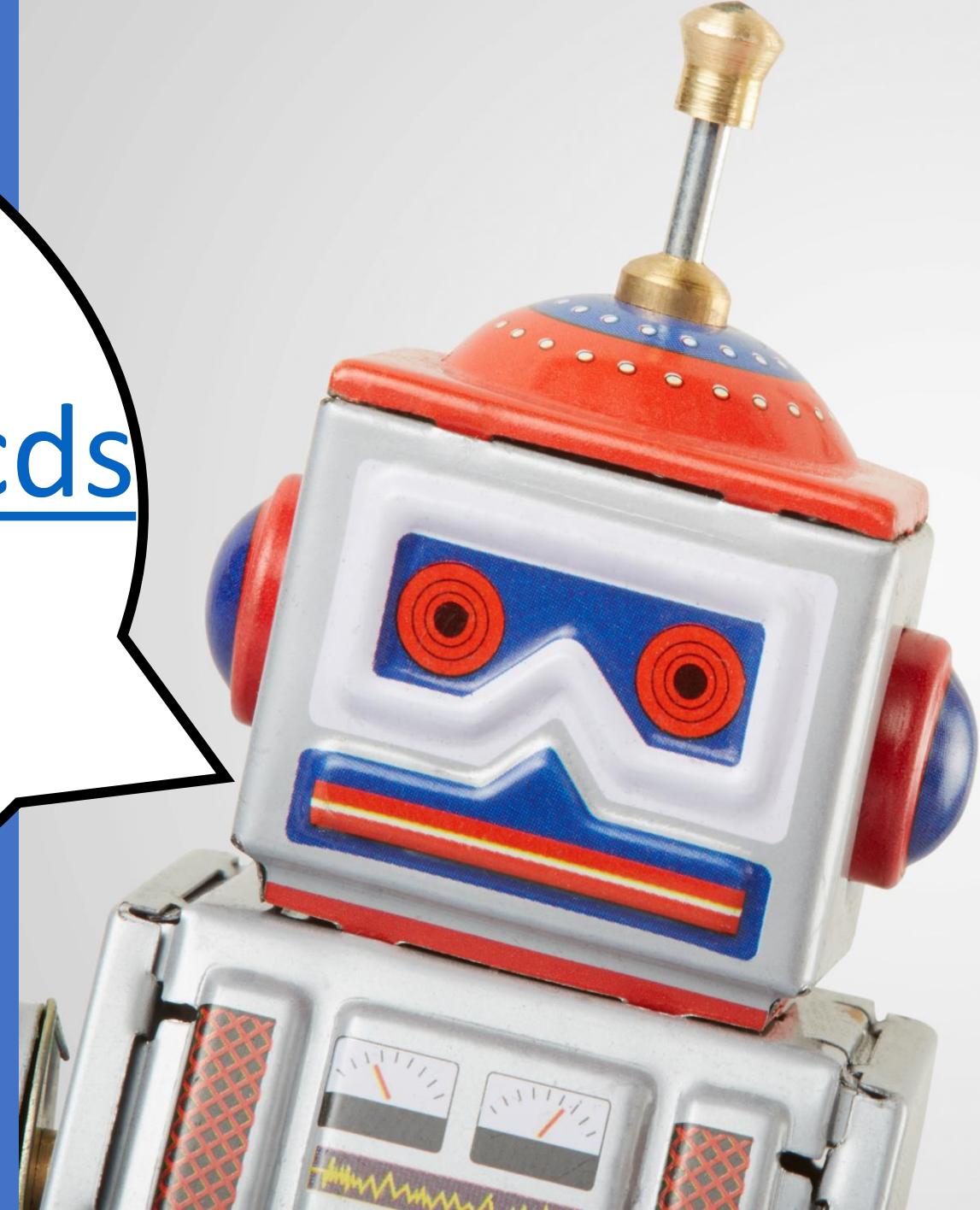


Ref (Total Recall, Johnny Cab)

Q&A Bot

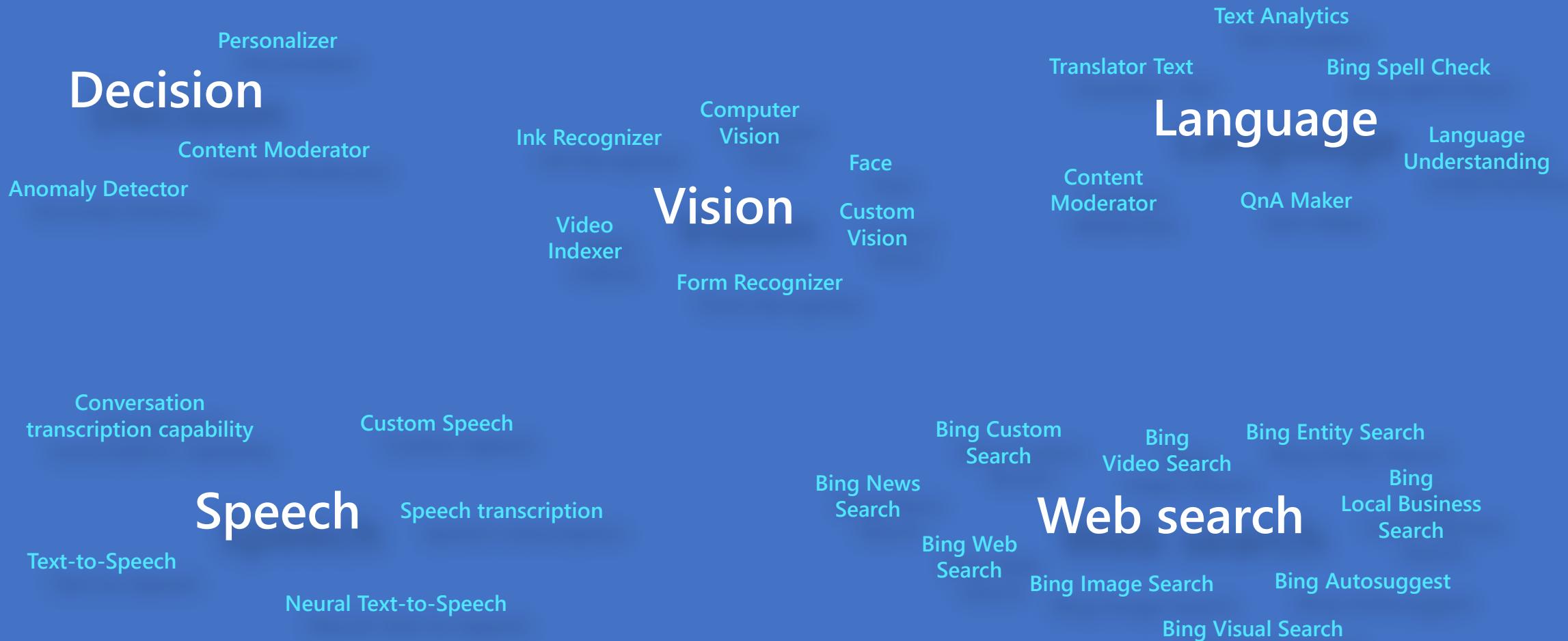
Try me here!

<https://aka.ms/mucds>



Azure Cognitive Services

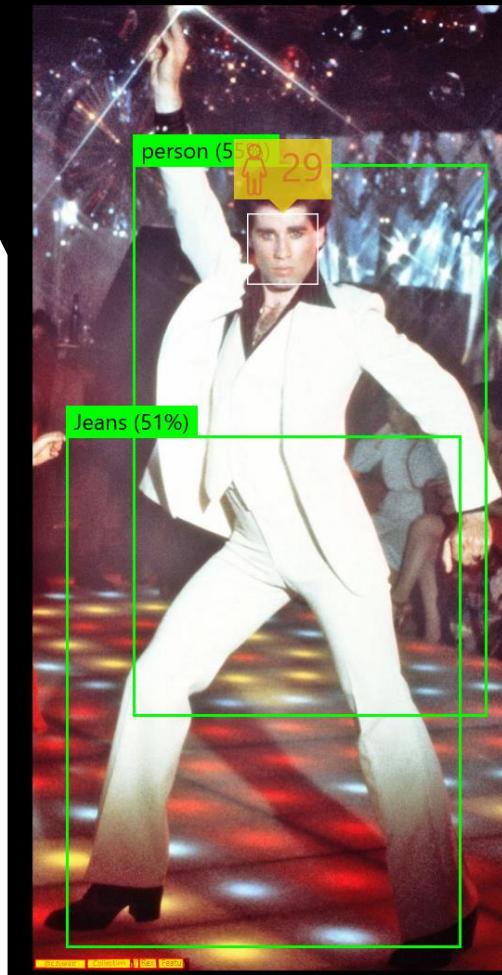
They say it got Smart: *Adding Intelligence*



SATURDAY NIGHT FEVER



Microsoft Intelligent Kiosk – Vision API



Summary Faces Objects Text

Description

a statue of a person (37%)

Colors

Background Foreground Dominant Accent

Red

White

White

Red

Tags

clothing (96%) indoor (93%) person (89%) dance (87%)
human face (84%) man (81%)

Faces

1 face

Objects

2 objects

Text

5 words

Landmarks

None

Microsoft AI advancements

Where are we *TODAY* Where are we going *TOMORROW*

96%
RESNET vision test
152 layers

5.1%
Switchboard speech
recognition test

88.493%
SQuAD reading
comprehension test
(exact match test)

69.9%
MT
research system

Object recognition
Human parity
2016



Machine reading
comprehension
Human parity
**Jan 2018
(inference)**

Machine translation
Human parity
March 2018

*100K human
generated
Q&A pairs*



Where next? Deep learning text understanding...

<https://www.youtube.com/watch?v=HXIfwL2-4Ek>



Maluuba and Microsoft Research

<https://labs.cognitive.microsoft.com/>

Microsoft acquires deep learning startup Maluuba; AI pioneer Yoshua Bengio to have advisory role

Jan 13, 2017 | [Harry Shum - Executive Vice President, Microsoft AI and Research Group](#)



Today is an exciting day for the advancement of AI at Microsoft. We have agreed to acquire [Maluuba](#), a Montreal-based company with one of the world's most impressive deep learning research labs for natural language understanding. Maluuba's expertise in [deep learning](#) and [reinforcement learning](#) for question-answering and decision-making systems will help us advance our strategy to [democratize AI](#) and to make it accessible and valuable to everyone — consumers, businesses and developers.

We've recently set new milestones for [speech](#) and [image recognition](#) using deep learning techniques, and with this acquisition we are, as Wayne Gretzky would say, skating to where the puck will be next — machine reading and writing.



Maluuba's vision is to advance toward a more general artificial intelligence by creating literate machines that can think, reason and communicate like humans — a vision exactly in line with ours. Maluuba's impressive team is addressing some of the fundamental problems in language understanding by modeling some of the innate capabilities of the human brain, from memory and common sense reasoning to curiosity and decision making. I've been in the AI research and development field for more than 20 years now, and I'm incredibly excited about the scenarios that this acquisition could make possible in conversational AI.

Imagine a future where, instead of frantically searching through your organization's directory, documents or emails to find the top tax-law experts in your company, for example, you could communicate with an AI agent that would leverage Maluuba's machine comprehension capabilities to immediately respond to your request. The agent would be able to answer your question in a company security-compliant manner by having a deeper understanding of the contents of your organization's documents and emails, instead of simply retrieving a document by keyword matching, which happens today. This is just one of hundreds of scenarios we could imagine as Maluuba pushes the state-of-the-art technology of machine literacy.

Liberate Your Data with **Visualisation** and **Conversation**!

So, What's Next?

- Get Power BI Desktop *for Free* here -
<https://powerbi.microsoft.com/en-us/desktop/>
- Try out Azure Services *for Free* here -
<https://azure.microsoft.com/en-au/free/>
- Study and sit your Azure Certifications here -
<https://www.microsoft.com/en-us/learning/azure-exams.aspx>
- *Free* online courseware to Learn Azure, Analytics and AI –
<https://docs.microsoft.com/en-us/learn/>
- Intelligent Kiosk (Azure Cognitive Services / AI) -
github code <https://github.com/Microsoft/Cognitive-Samples-IntelligentKiosk>



References

- <https://powerbi.microsoft.com/en-us/blog/the-art-and-science-of-action-driven-visual-analytics/>
- <https://www.microsoft.com/en-us/research/project/data-driven-storytelling/>
- <https://powerbi.microsoft.com/en-us/datajournalism/>
- <https://news.microsoft.com/transform/can-data-storytelling-help-save-local-journalism/>
- <https://powerbi.microsoft.com/en-us/blog/webinar-wednesday-data-storytelling/>

