

# Artificial Intelligence APIs

Workshop n°1(01)

—  
Arlemi Turpault  
Developer Advocate

Sean Tracey  
Developer Advocate



# INDEX

## SAN FRANCISCO

12<sup>th</sup> February

—

AI APIs 101

5<sup>th</sup> March

—

Chatbots

19<sup>th</sup> March

—

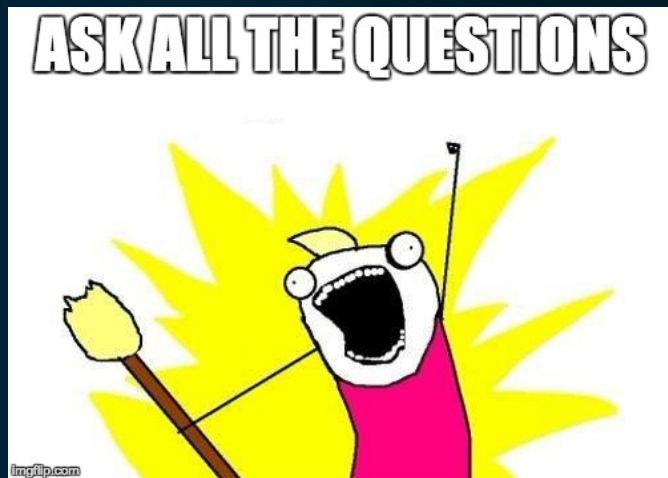
Natural Language  
Processing

9<sup>th</sup> April

—

Visual Recognition

# Before we start...



Source: [imgflip.com](https://imgflip.com)



Source: [imgflip.com](https://imgflip.com)

# I. Why AI?

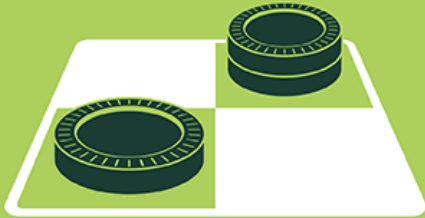


Source: [giphy.com](https://giphy.com)

# Know the difference

## ARTIFICIAL INTELLIGENCE

Early artificial intelligence stirs excitement.



## MACHINE LEARNING

Machine learning begins to flourish.



## DEEP LEARNING

Deep learning breakthroughs drive AI boom.



Source: [blogs.nvidia.com](https://blogs.nvidia.com)

# Artificial Intelligence

“The science and engineering of making intelligent machines.”  
- John McCarthy

# Machine Learning

“A computer program is said to learn from experience  $E$  with respect to some class of tasks  $T$  and performance measure  $P$  if its performance at tasks in  $T$ , as measured by  $P$ , improves with experience  $E$ .”

- Tom Mitchell



# Deep Learning

“A field of study that gives computers the ability to learn without being explicitly programmed.”

- Someone on [the internet](#)

# There's a reason why it's called Big Data

102,000,000

wearables shipped in 2016, growing to  
237,000,000 by 2021

100,000

new cancer articles published every year

80,000,000

MRIs taken every year, up from 3,000,000  
in 1980

2,200,000,000

locations generating hyperlocal weather  
forecasts across the globe every 15 minutes

2,581,586

Emails every second

10,000

new software vulnerabilities recorded in 2016,  
up 30% since 2011

600,000,000

forms of malware - with close to 400k variations  
introduced daily

500

hours of video uploaded to YouTube  
every minute

# The power of AI APIs



# Example with Natural Language Understanding

The dog ran up the street. It got a treat from its owner.

The dog ran up the street. It got a treat from its owner.

pet

movement

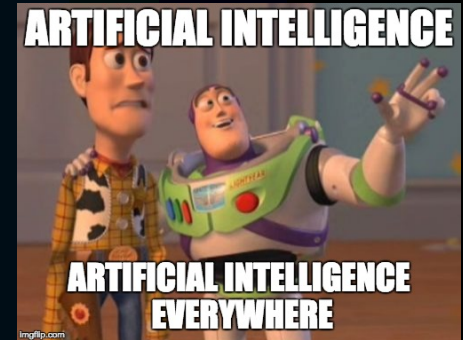
location

food

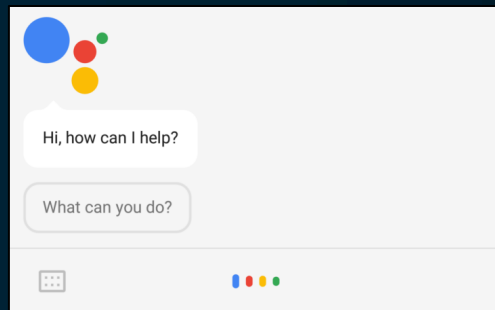
person



## II. Where AI is used today



Source: [imgflip.com](https://imgflip.com)



Source: [androidpolice.com](http://androidpolice.com)



Source: [quora.com](https://www.quora.com)

#### Top Picks for Arlemi



Source: [netflix.com](http://netflix.com)

#### Recommendations for you in Toys & Games



Source: [amazon.co.uk](http://amazon.co.uk)

# III. APIs & Platforms

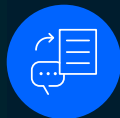
# Services

## Vision

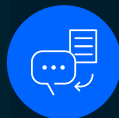


Visual  
Recognition

## Speech



Text  
to Speech

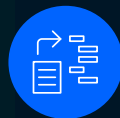


Speech  
to Text

## Language

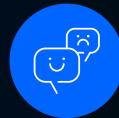


Language  
Translator

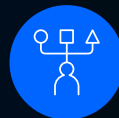


Natural  
Language  
Understanding

## Empathy



Tone  
Analyzer



Personality  
Insights

## Conversation



Conversation  
Service



Platforms

Google

Microsoft Azure

SALES 0800 098 8435

MY ACCOUNT

PORTAL

Search

Why Azure? Solutions Products Documentation Pricing Training Marketplace Partners Support Blog More

FREE ACCOUNT

Use AI to solve business problems

Microsoft

Cloud AI

Cloud AutoML  
Train high quality models with minimum effort

Cloud Machine Learning  
Machine Learning

Cloud Job Dis  
Power your jobs

Dialogflow E  
Create conversational platforms

Cloud Natural  
Derive insights from

Cloud Speech  
Speech to text co

Cloud Transla  
Dynamically trans

Cloud Vision  
Derive insight from images powered by ML

Cloud Video Intelligence  
Extract metadata from videos

API-driven services

Our intelligent services provide a new way of reinventing-the-wheel by developing custom AI solutions

Vision Services

Amazon Rekognition Image  
Deep learning-based image analysis

Learn more »

Language Services

Amazon Comprehend  
Discover insights and relationships in text

Learn more »

AI

Leverage IBM Watson® for natural language processing, visual recognition and machine learning.  
[Learn more](#)

Watson Conversation  
Build and deploy chatbots and virtual agents

Watson Discovery  
Uncover connections in data by combining automated ingestion with advanced AI functions

Watson Speech to Text (STT)  
Easily convert audio and voice into written text

Watson Text to Speech (TTS)  
Convert written text into natural-sounding audio in a variety of languages and voices

Watson Language Translator  
Dynamically translate news, patents or conversational documents

Watson Natural Language Classifier  
Interpret and classify natural language with confidence

Watson Natural Language Understanding  
Analyze text to extract metadata from content such as concepts, entities and sentiment

Watson Visual Recognition  
Tag, classify and search visual content using machine learning

Watson Tone Analyzer  
Analyze emotions and tones in written content

Watson Personality Insights  
Predict personality characteristics, needs and values through written text

AWS

IBM

# Calling an API

1. Create the service and retrieve the credentials
2. Call an endpoint with your data and credential as parameters
3. ...
4. Profit!



Source: [giphy.com](https://giphy.com)

# Hands-on Workshop

[ibm.biz/ai-api-session1](https://ibm.biz/ai-api-session1)

# Questions?



Source: [giphy.com](https://www.giphy.com)

# Thank you

Useful links:

[IBM Code](#)

[London Meetup](#)

[CognitiveClass.ai](#)

[Register to IBM Cloud](#)

Arlemi Turpault  
Developer Advocate

Sean Tracey  
Developer Advocate

—

<http://ibm.biz/slack-code-ldn>

arlemi.t@ibm.com

@arlemi

