Lawrence Rowland

@lawrencerowland

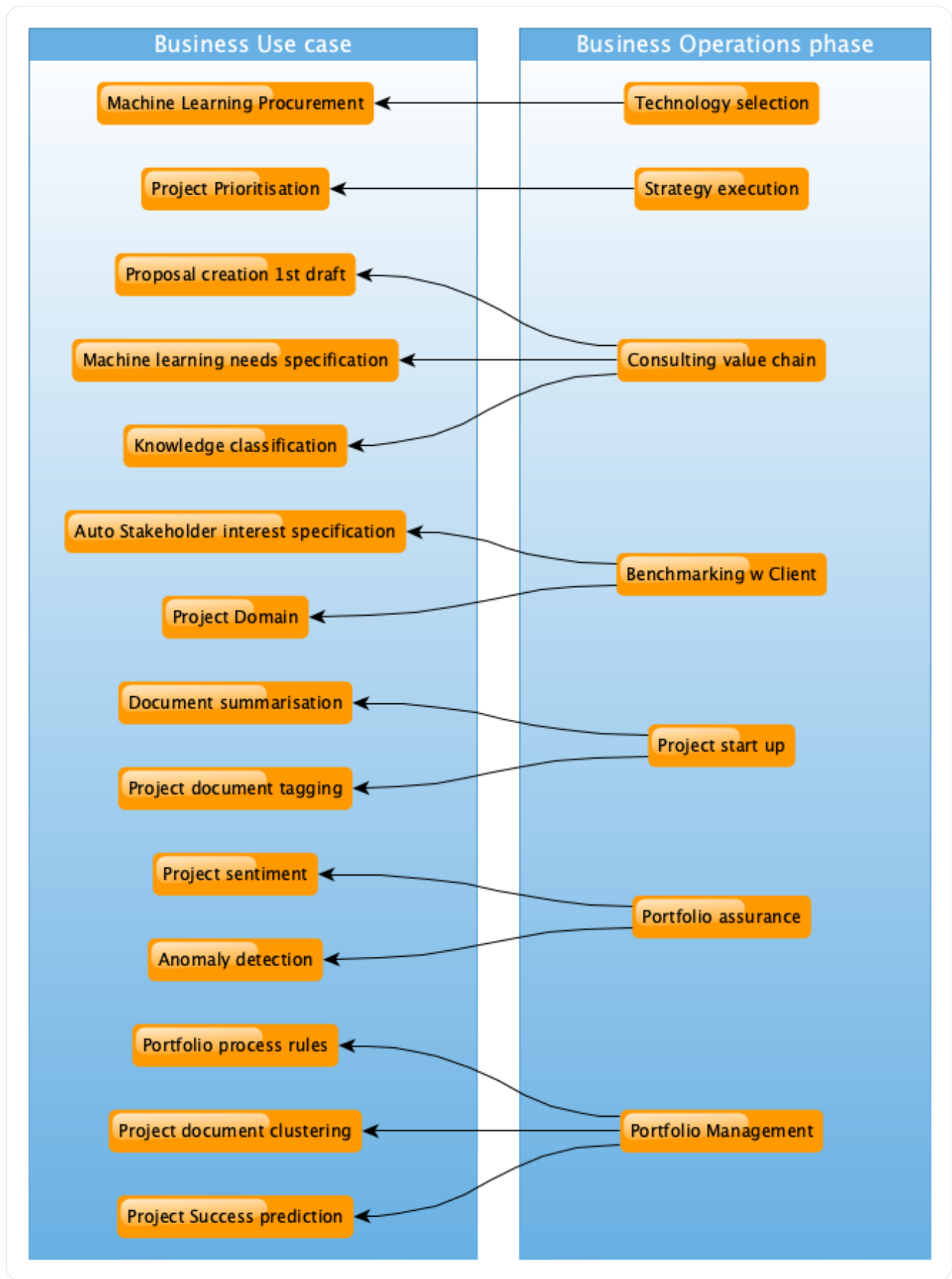Feb 10th 2020, 10 tweets, 4 min read

Lawrence Rowland
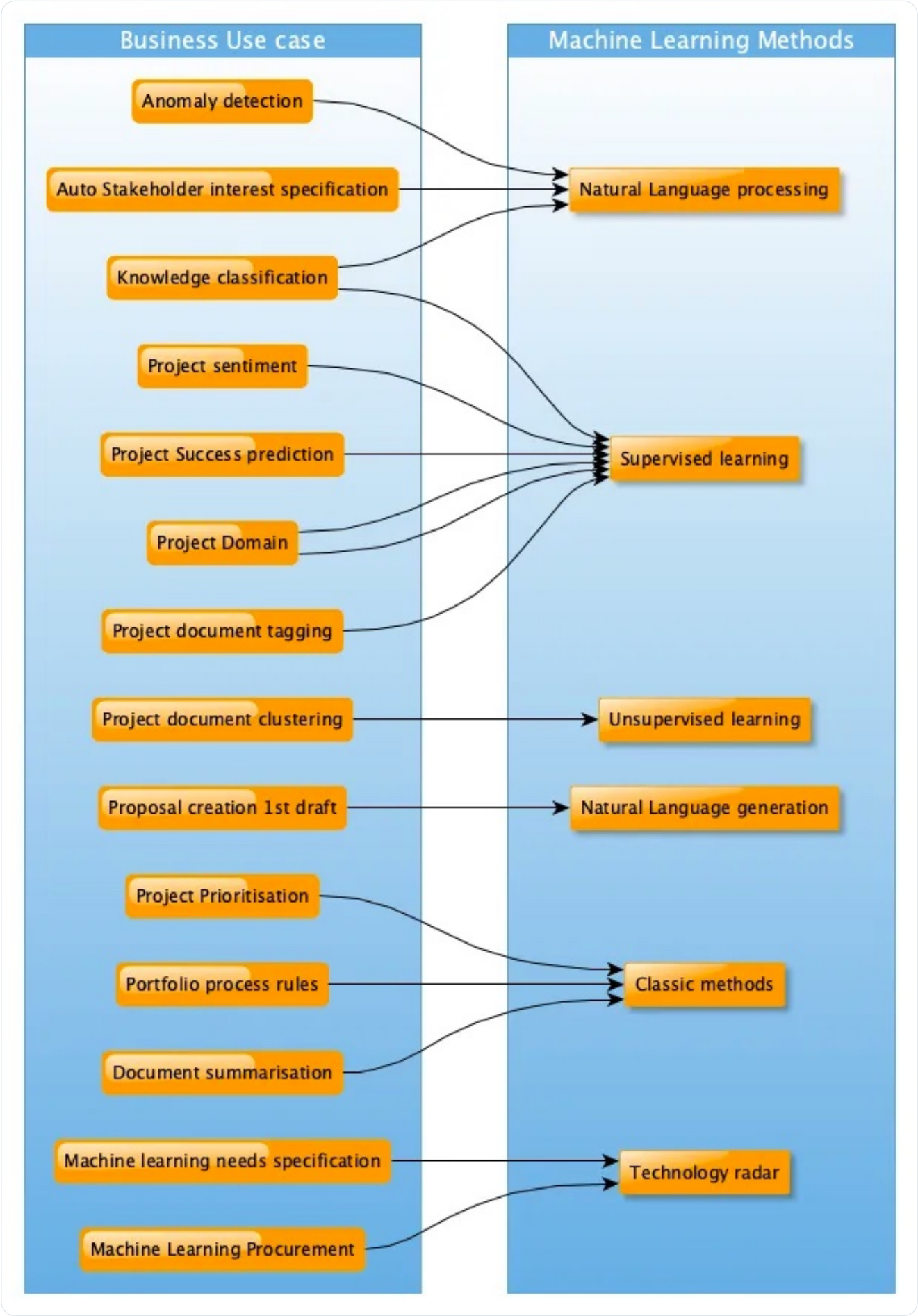
@lawrencerowland

DIY use cases for #machinelearning in #projectmanagement and #consulting

Business Use case	Business Operations phase
Machine Learning Procurement	Technology selection
Project Prioritisation	Strategy execution
Proposal creation 1st draft	Consulting value chain
Machine learning needs specification	
Knowledge classification	
Auto Stakeholder interest specification	Benchmarking w Client
Project Domain	
Document summarisation	Project start up
Project document tagging	
Project sentiment	Portfolio assurance
Anomaly detection	
Portfolio process rules	Portfolio Management
Project document clustering	
Project Success prediction	

For these project management use cases, here are some types of machine learning to consider.

Business Use case

- Anomaly detection
- Auto Stakeholder interest specification
- Knowledge classification
- Project sentiment
- Project Success prediction
- Project Domain
- Project document tagging
- Project document clustering
- Proposal creation 1st draft
- Project Prioritisation
- Portfolio process rules
- Document summarisation
- Machine learning needs specification
- Machine Learning Procurement

Machine Learning Methods

- Natural Language processing
- Supervised learning
- Unsupervised learning
- Natural Language generation
- Classic methods
- Technology radar

And here is a specific type of ML model you could apply for each case [#project](#)
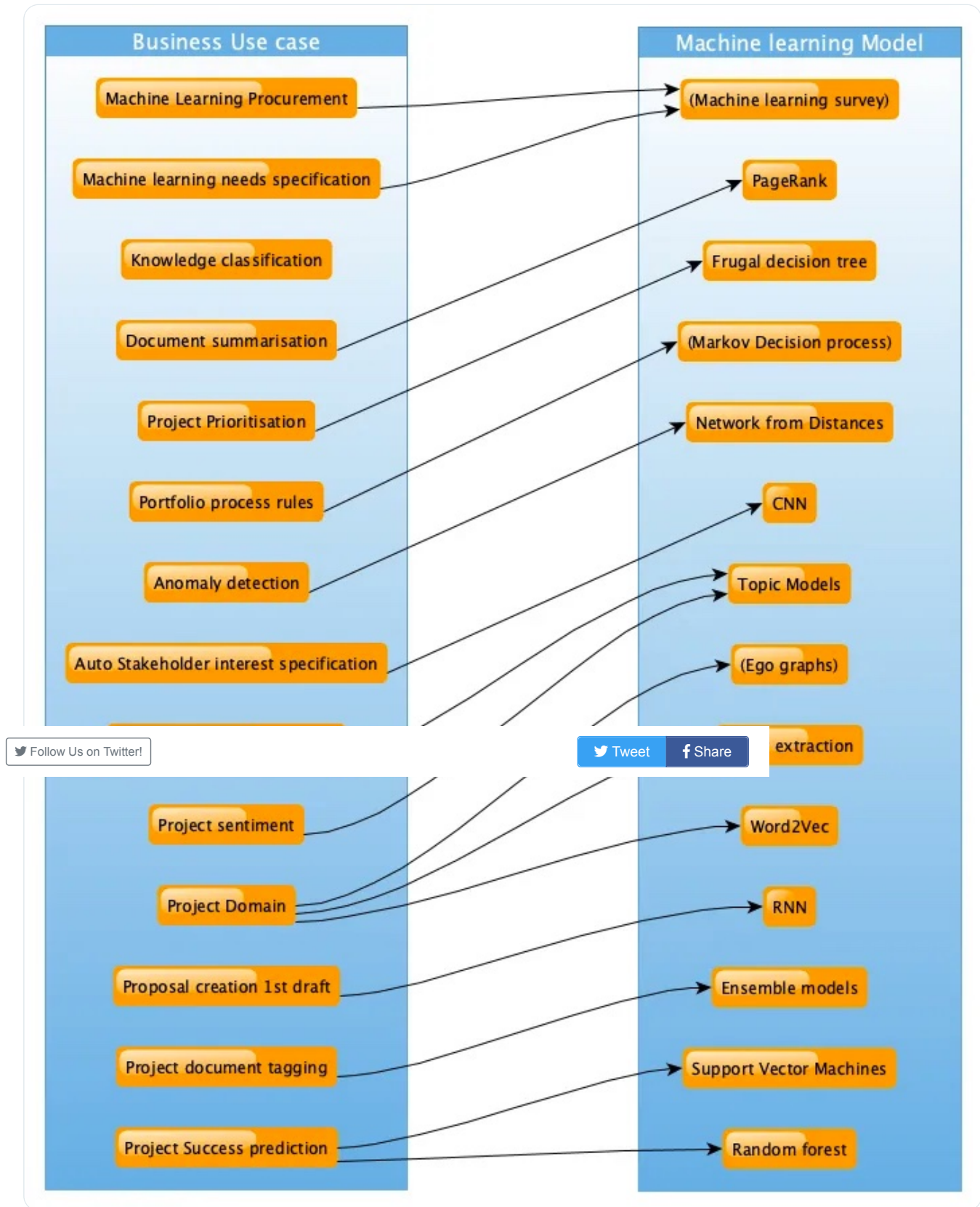
Here are examples of accessible environments for applying these ML methods
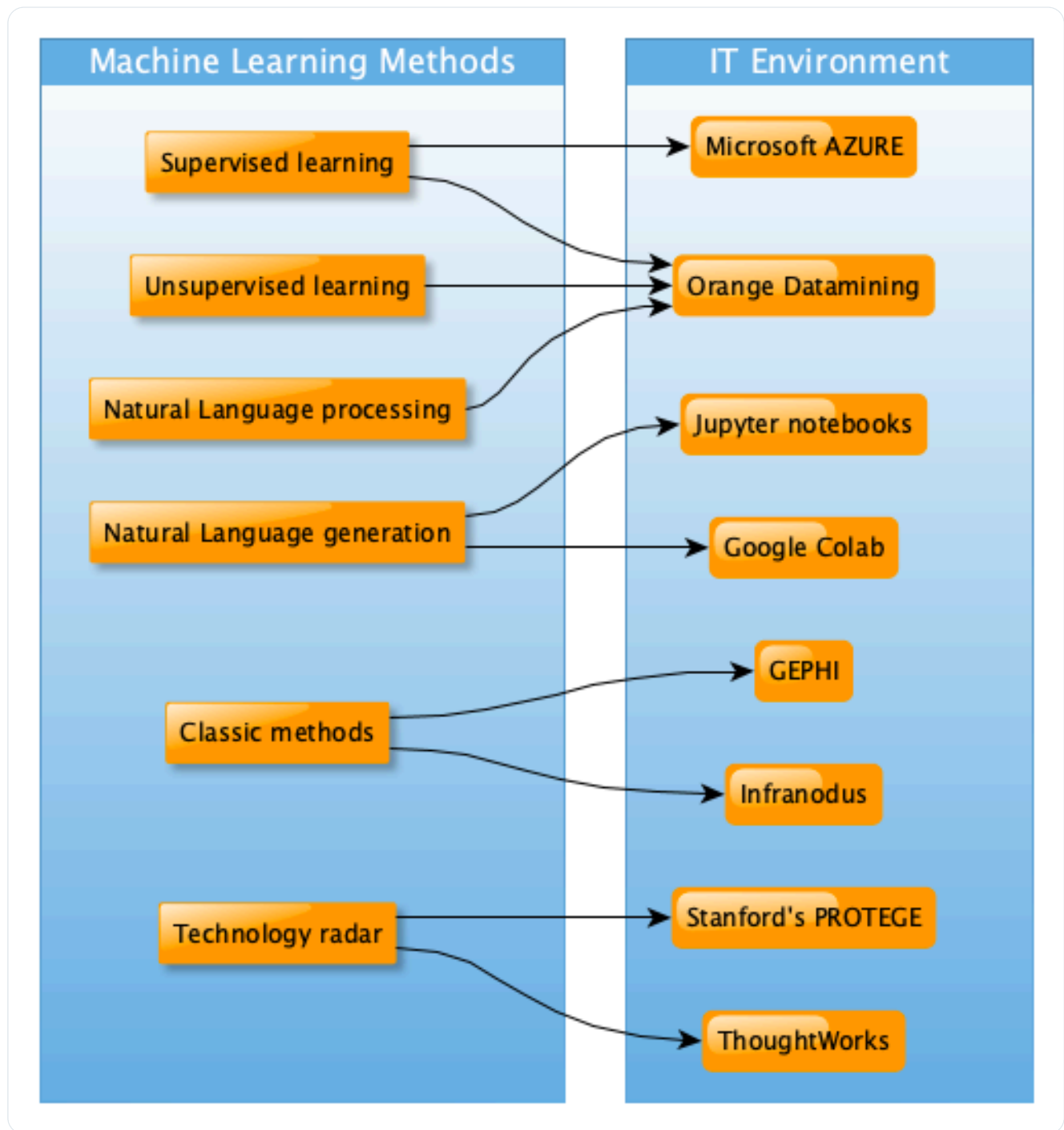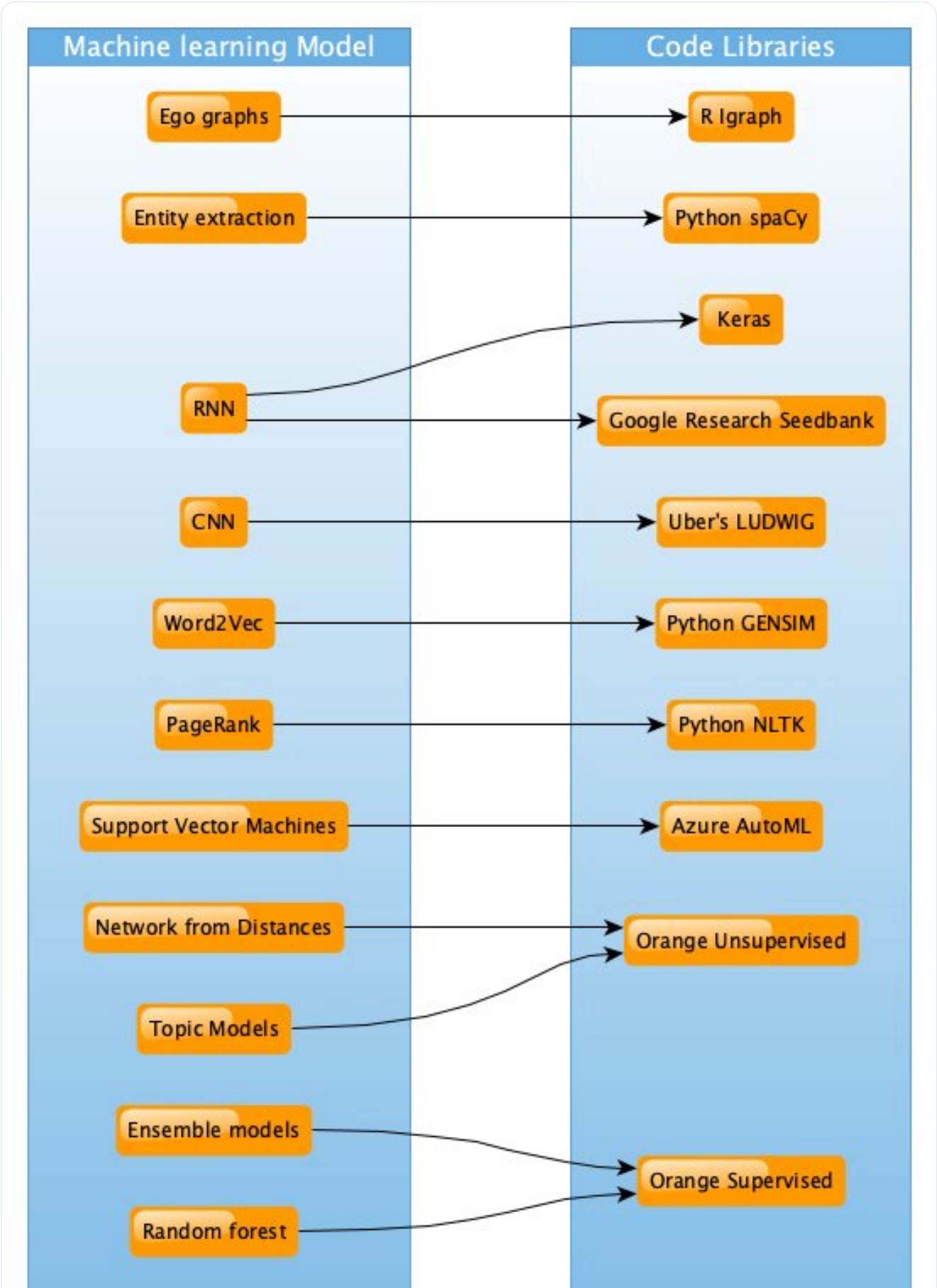

Recap:

1. Identify possible use cases
2. Map to business area/lifecycle
3. Narrow down to a generic ML method
4. Select a straightforward ML model
5. Choose a suitable model environment

Next up:

6. Choose a code library or algorithm to apply that model
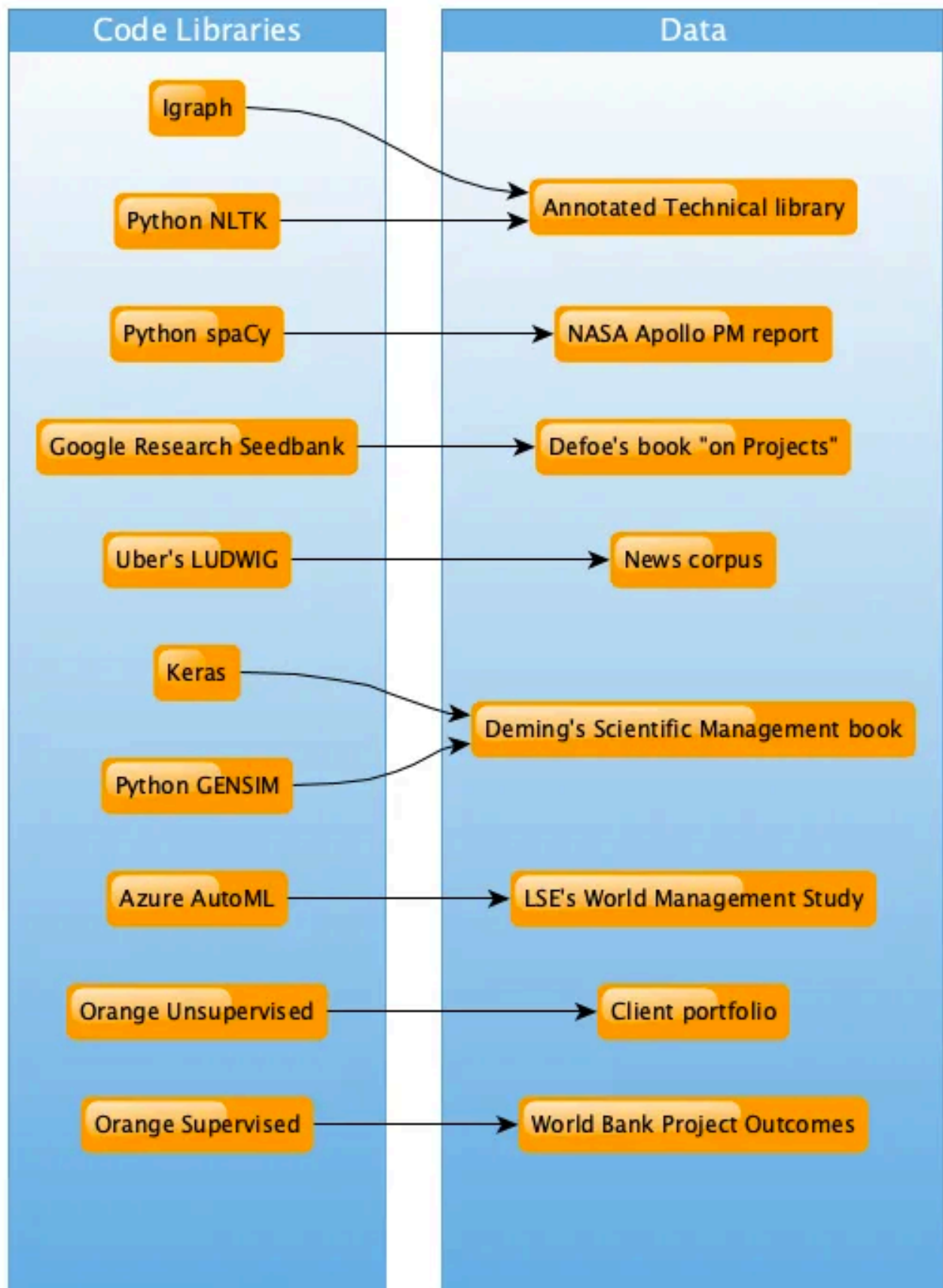7. Select data-set

Of course to get started, one also starts at 6 and 7, and works back up to suitable business use cases. 🔗

find a suitable code library for the model selected

Machine learning Model	Code Libraries
Ego graphs	→ R Igraph
Entity extraction	→ Python spaCy
RNN	→ Keras
RNN	→ Google Research Seedbank
CNN	→ Uber's LUDWIG
Word2Vec	→ Python GENSIM
PageRank	→ Python NLTK
Support Vector Machines	→ Azure AutoML
Network from Distances	→ Orange Unsupervised
Topic Models	→ Orange Unsupervised
Ensemble models	→ Orange Supervised
Random forest	→ Orange Supervised

Select a data-set, which is either one from the business or is a standard data-set / reference bench-mark / toy data that is enough to mock something up.

Code Libraries	Data
Igraph	Annotated Technical library
Python NLTK	NASA Apollo PM report
Python spaCy	Defoe's book "on Projects"
Google Research Seedbank	News corpus
Uber's LUDWIG	Deming's Scientific Management book
Keras	LSE's World Management Study
Python GENSIM	Client portfolio
Azure AutoML	World Bank Project Outcomes
Orange Unsupervised	
Orange Supervised	

This gives something to play with, and get something to work. bit.ly/2OIcj4h has an AI canvas for planning development at high level, understanding purpose and constraints. Then there are plenty of ML workflows to provide structure for developing the prototype.

The AI Canvas

What task/decision are you examining?
Briefly describe the task being analyzed.

◎ Prediction
Identify the key uncertainty that you would like to resolve.

⚖ Judgment
Determine the payoffs to being right versus being wrong. Consider both false positives and false negatives.

➔ Action
What are the actions that can be chosen?

▣ Outcome
Choose the measure of performance that you want to use to judge whether you are achieving your outcomes.

◎ Training
What data do you need on past inputs, actions and outcomes in order to train your AI and generate better predictions?

⬇ Input
What data do you need to generate predictions once you have an AI algorithm trained?

◈ Feedback
How can you use measured outcomes along with input data to generate improvements to your predictive algorithm?

How will this AI impact on the overall workflow?
Explain here how the AI for this task/decision will impact on related tasks in the overall workflow. Will it cause a staff replacement? Will it involve staff retraining or job redesign?

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mentions 🔗

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`@threadreaderapp unroll`

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Related threads

afroRoboticist
@AfroRoboticist

May 15th 2019

Why Python? A thread as requested by @hackSultan Will try to make this as unbiased as possible. 😁 👇🏾

Read 24 tweets

Vishal Vachhani
@vishal_gv

Jan 11th 2019

#MachineLearning in System #trading. Here is a simple idea to improve your system.
#MachineLearning(#ML,#DeepLearning) is used in stock trading algorithms/system intraday or EOD based system. Mostly these systems are predictive systems. (1/n)

These predictive system are based on given OHLC and other indicators (like RSI,MA,etc) tries to predict the value of next close/open/...using Machine learning/AI algorithms. There are many simple statistic based systems(call it non-AI
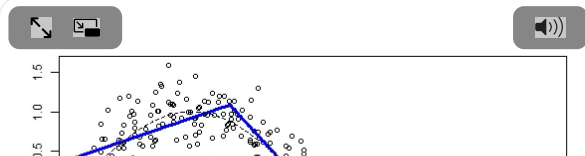
Read 15 tweets

@DynamicWebPaige
@DynamicWebPaige

Feb 12th 2018

Inspired by the big ol' long list of deep learning models I saw this morning, and @SpaceWhaleRider's love of science-y A-Z lists, I've decided to create an A to Z series of tweets on popular #MachineLearning and #DeepLearning methods / algorithms. Ready? Here we go:

Read 28 tweets

Trending hashtags

#webDev #RaspberryPi #FacialRecognition #visaissues #Python #ODSCWest #drones #Content #statistics #MLonCode

#MadeWIthUnity #AnneFreadman #Genomics #ANN #blockchain #science #SIGGRAPH18 #smallsteps #whitepaper

#machinelearning #ai #Bigdata #Study #eticadelosdatos #ArtificialIntelligence
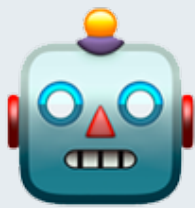
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