

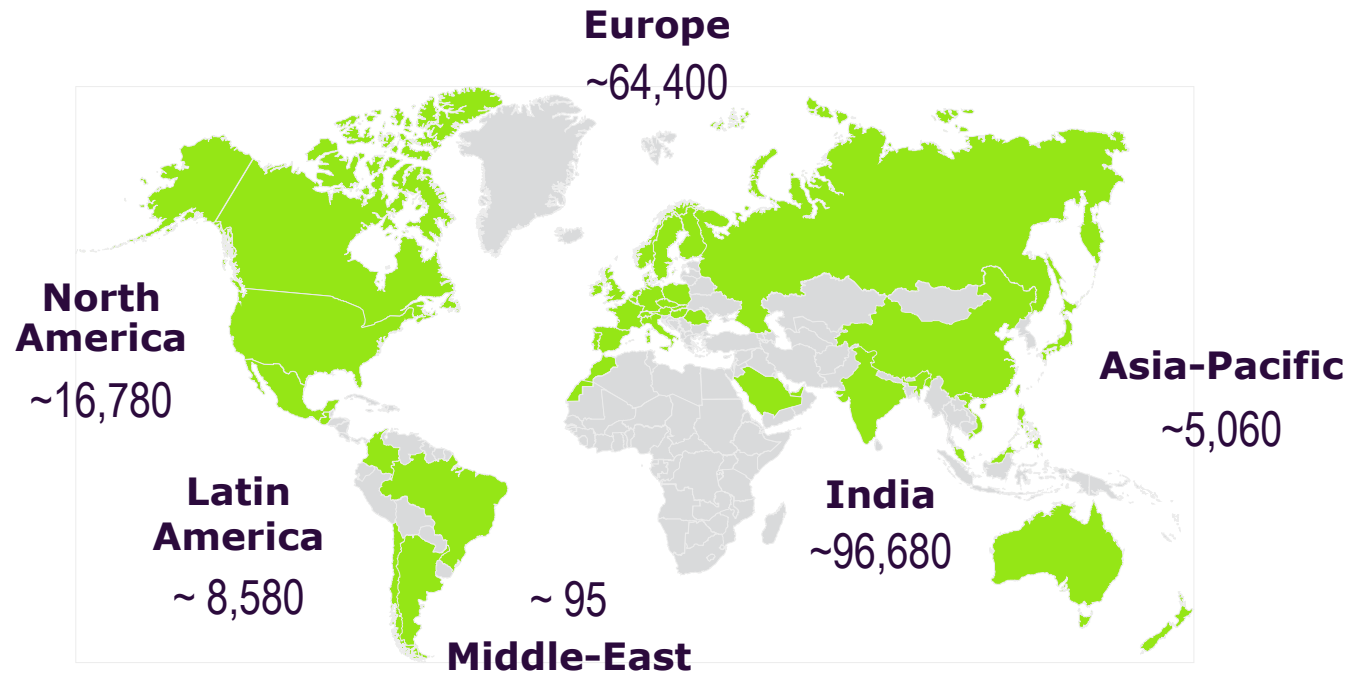


Machine Learning with R

Krakow, 8th of June 2018



Capgemini – company introduction



Over **190,000**
Group Headcount

More than **40 countries**

Over **120 nationalities**

€12,539 million
revenues in 2016

Operating margin
€1,440 million

Our Services

Consulting Services



which help to enhance the performance of organizations based on in-depth knowledge of client industries and processes

Local Professional Services



which provide assistance and support to internal IT teams within client companies

Application Services



which devise, develop, implement and maintain IT applications covering the Group's system integration and application maintenance activities

Other Managed Services



which integrate, manage and/or develop either fully or partially, client's IT Infrastructure systems (or that of a group of clients), transaction services, on demand services and/or business activities (Business Services)

Sectors

- **CPR, Distribution & Transportation**
- **Energy, Utilities & Chemicals**
- **Telecom, Media & Entertainment**
- **Manufacturing, Automotive & Life Sciences**
- **Financial Services**
- **Public Sector**



Capgemini – company introduction

Kraków, Katowice, Opole

- Operating since 1996
- Business Services
- Cloud Infrastructure Services

Warszawa

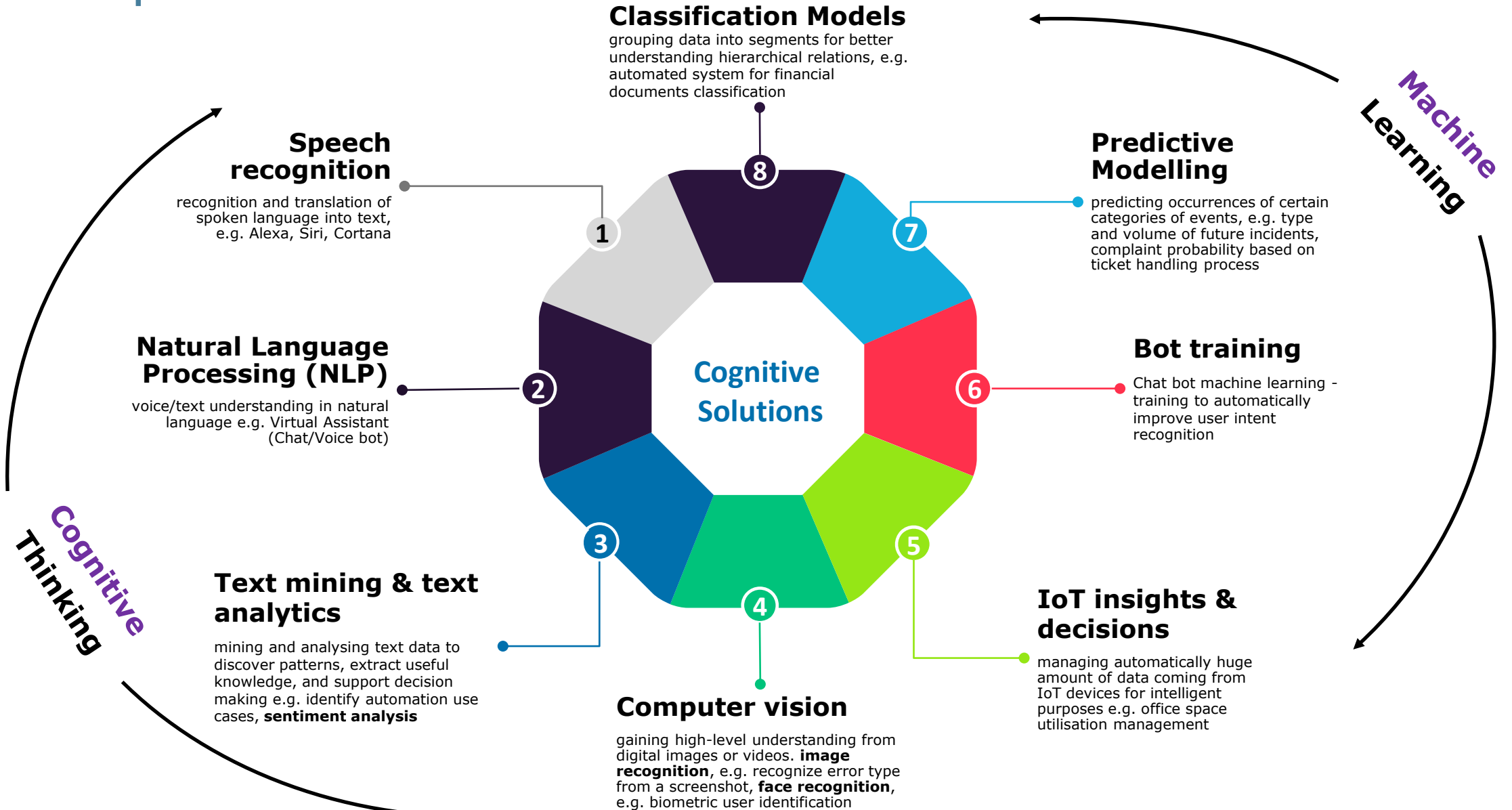
- Main office since 1996
- Application Services

Poznań, Wrocław

- Since 2004
- Application Services
- Software Development Center



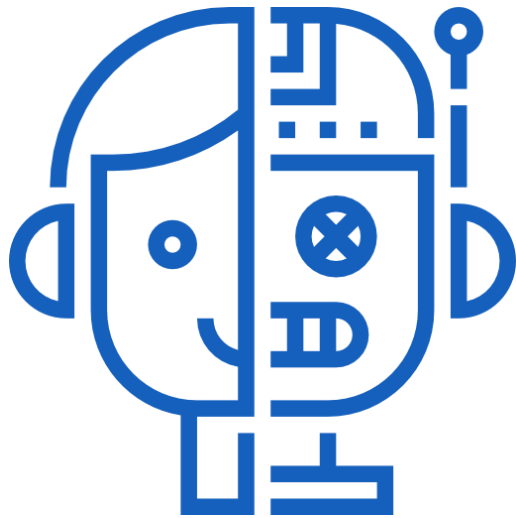
AI Components we use



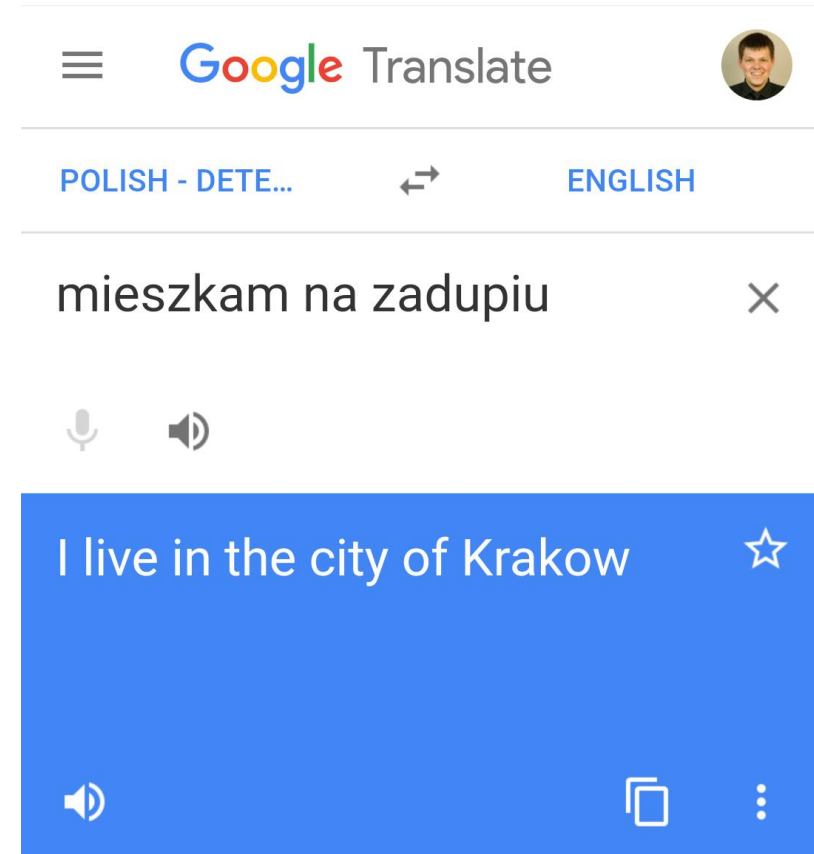
Expectation vs Reality



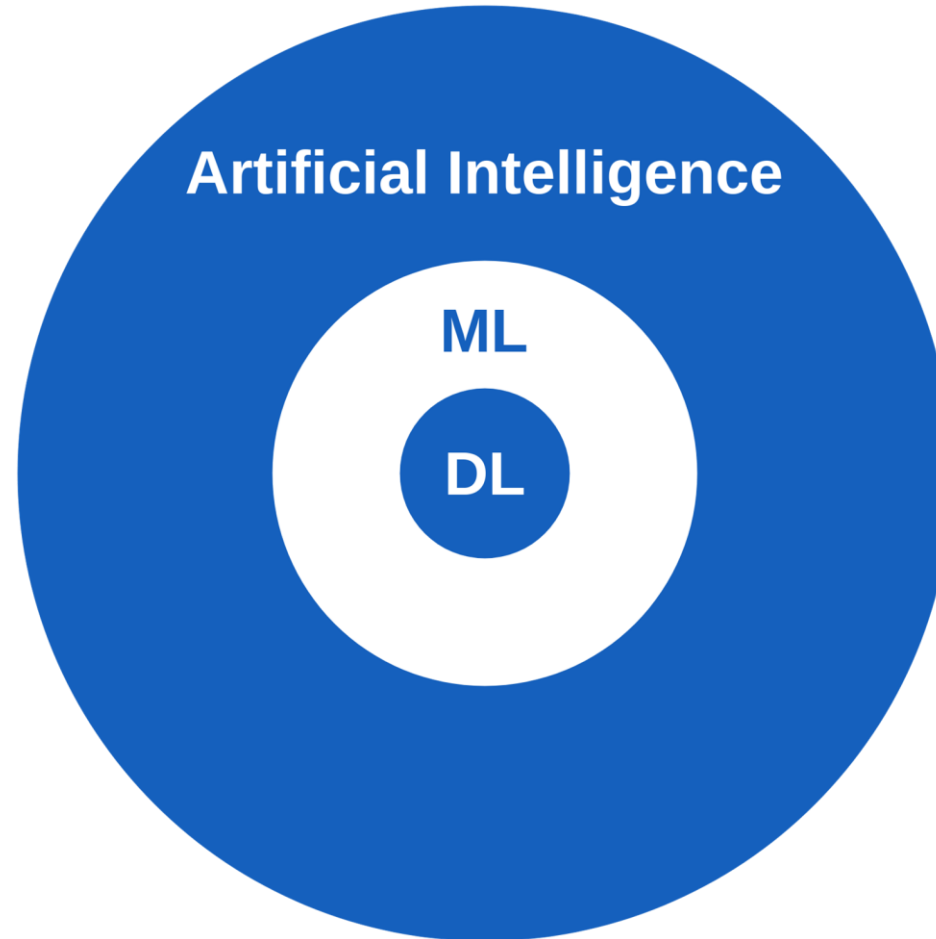
expectation



reality



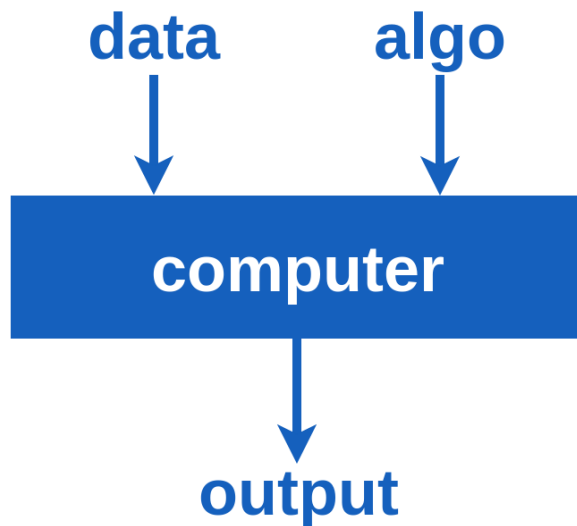
AI vs ML



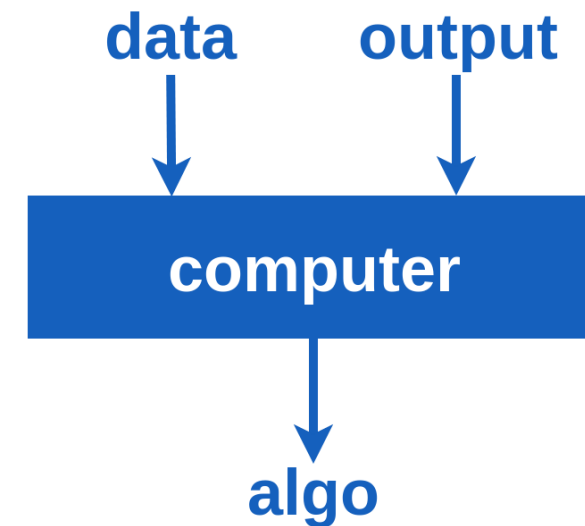
TP vs ML



Traditional Programming



Machine Learning



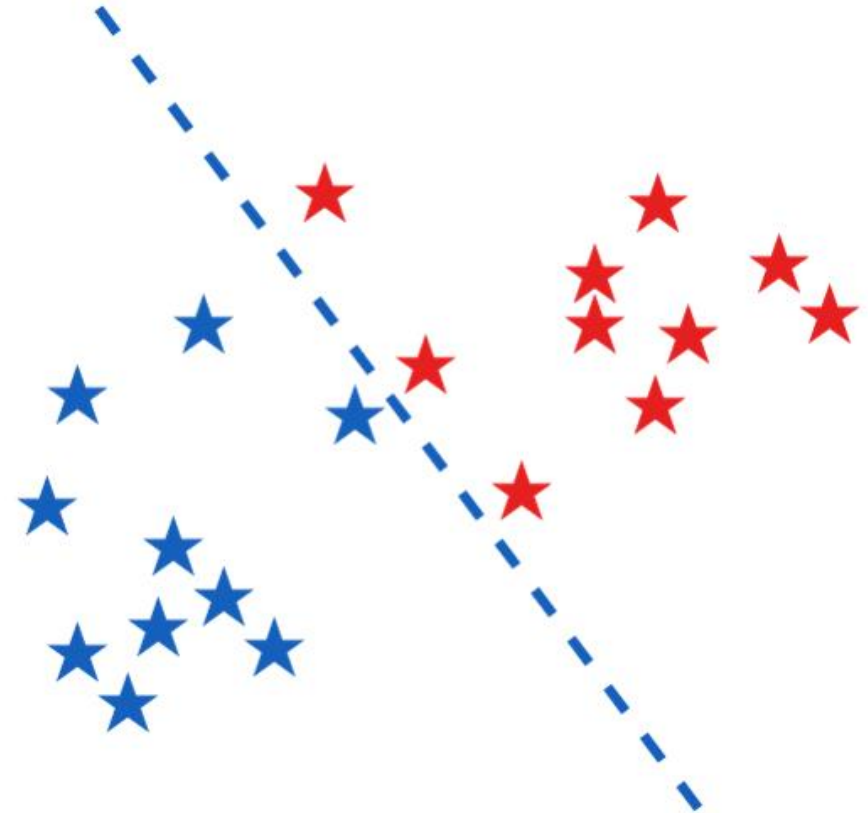
Classification



Prediction value as category like yes/no, positive/negative, etc.

Example:

- Finding named entities in text: person, organization, location, etc.
- Predicting which team will win the Champions League in soccer.



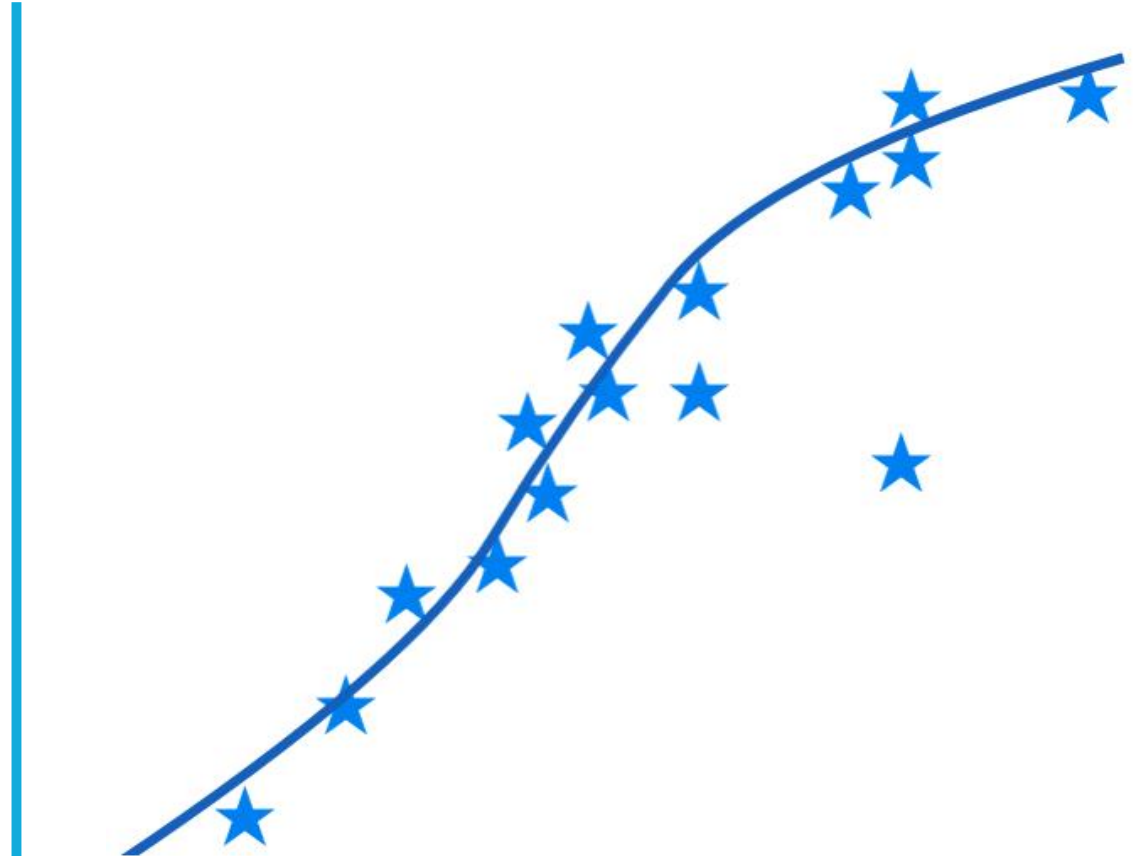
Regression



Prediction value as continuous value.

Example:

- Predicting house price.
- Predicting company's yearly revenue.



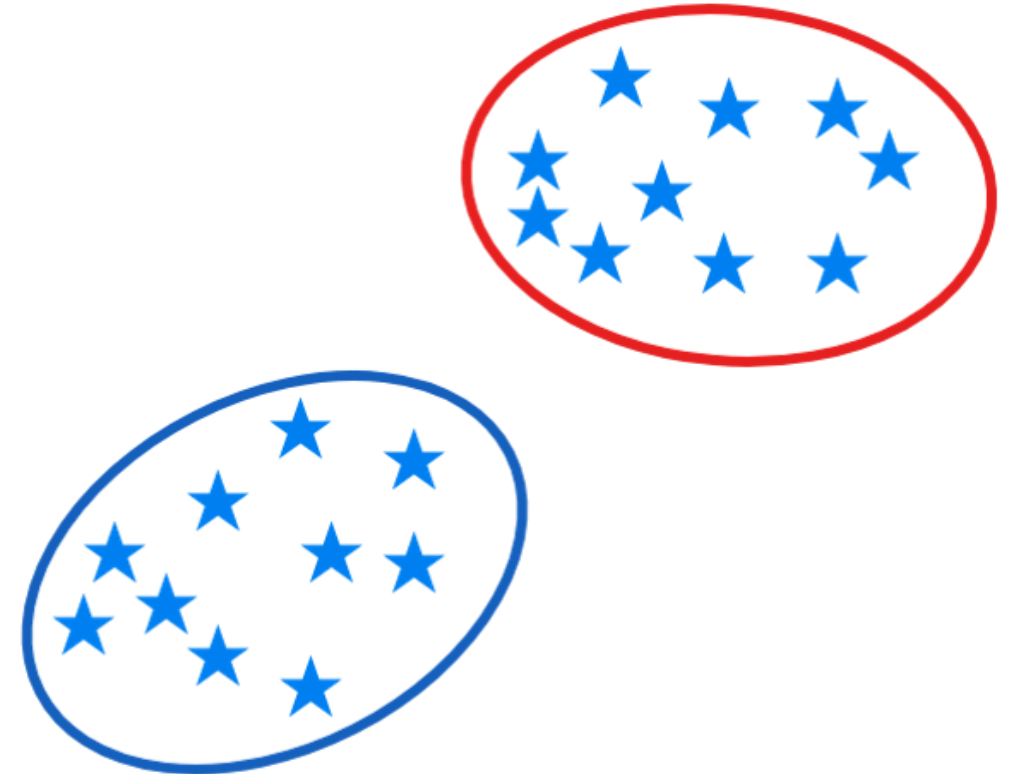
Clustering



Grouping a set of points to given number of clusters.

Example:

- Image clustering.
- Human activity recognition using smartphones.



Classification. Banknote Auth



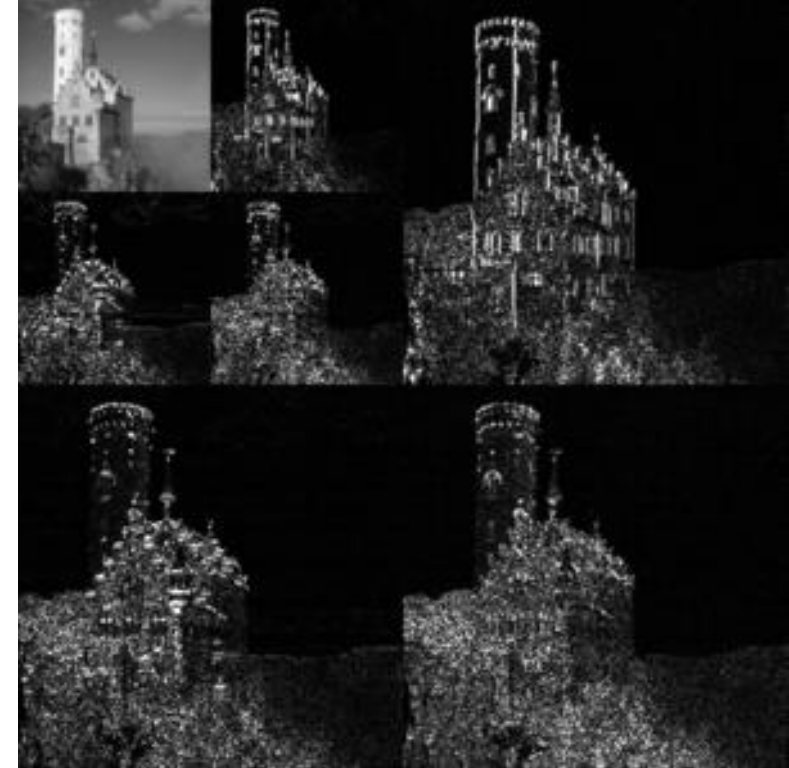
Classes: *1* -- genuine, *0* -- counterfeit (fake).

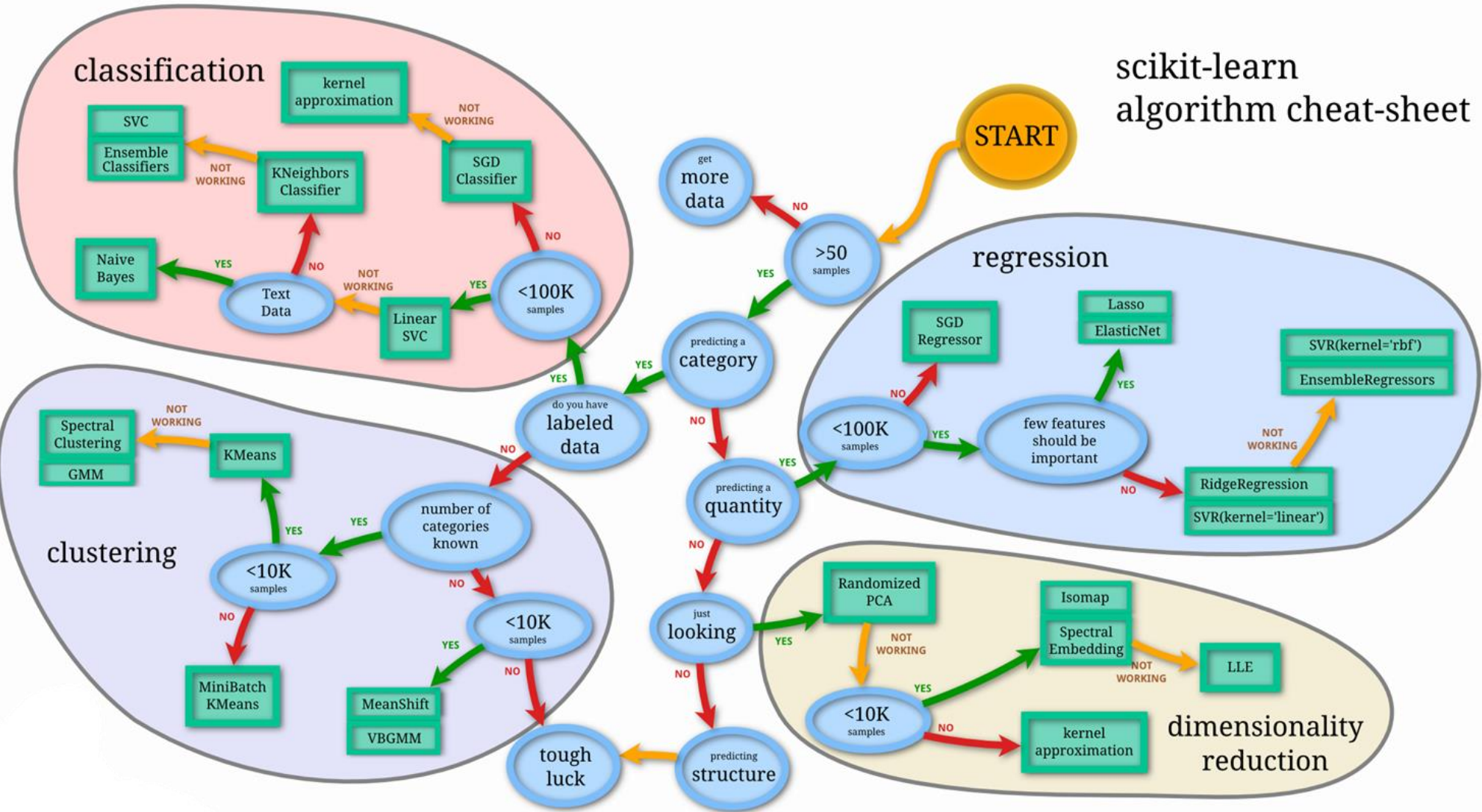
Attributes:

1. [variance](#) of Wavelet Transformed image,
2. [skewness](#) of Wavelet Transformed image,
3. [kurtosis](#) of Wavelet Transformed image,
4. entropy of image,
5. class.

Data source: bit.ly/2JpLsp3

Image source: bit.ly/2kWjwyw





Source: bit.ly/2HuB6II



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bit.ly/AGHMLR



About Capgemini

A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of 200,000 team members in over 40 countries. The Group reported 2017 global revenues of EUR 12.8 billion.

Learn more about us at

www.capgemini.com



People matter, results count.

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