



International Center for Tropical Agriculture
Since 1967 Science to cultivate change

Big Data

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Dan Ariely ✓

@danariely

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Big data is like teenage sex: everyone talks about it, nobody really knows how to do it, everyone thinks everyone... fb.me/1r54f62oU

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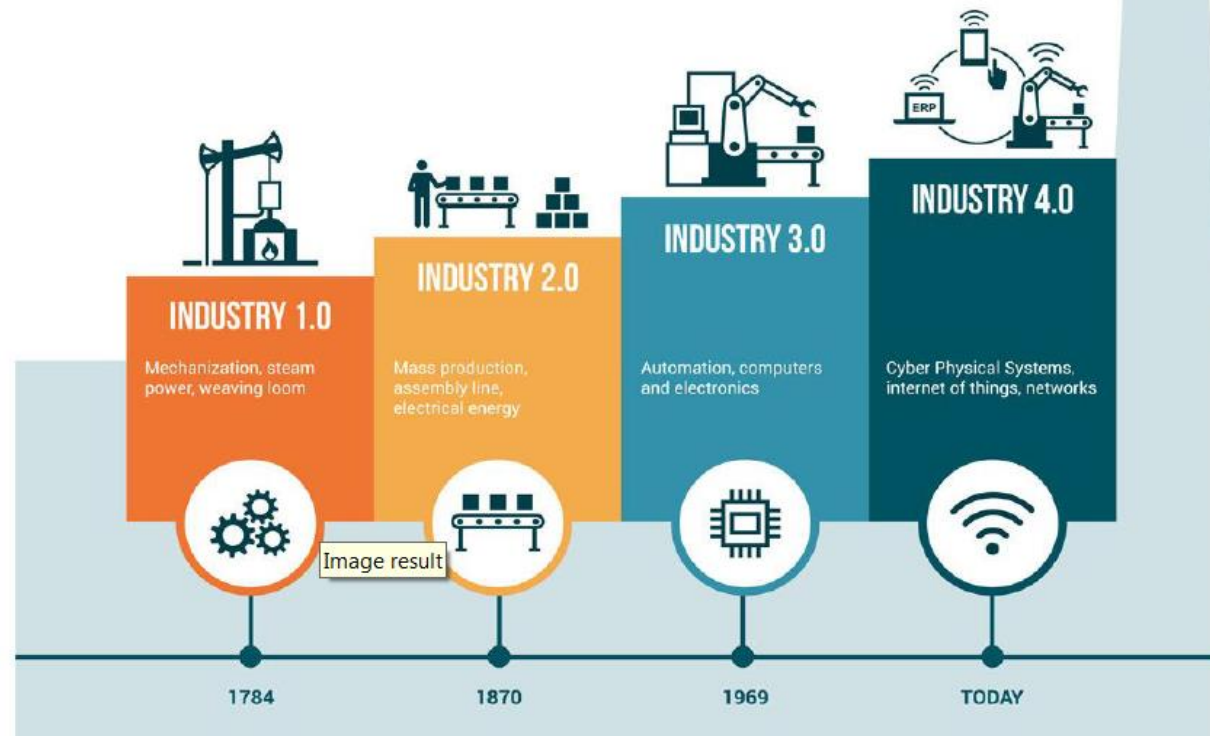


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INDUSTRIAL REVOLUTION

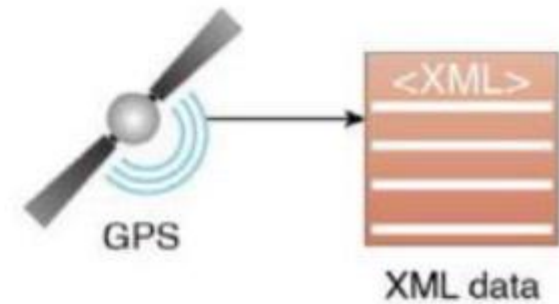
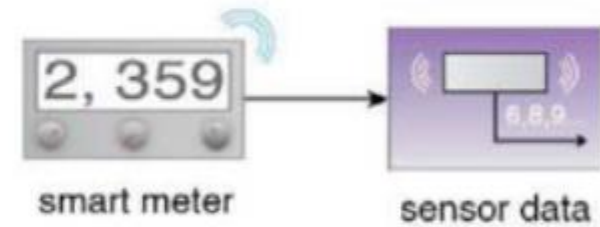
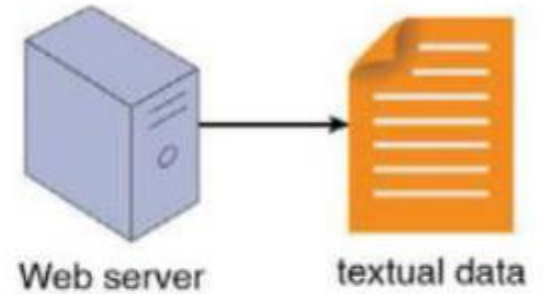
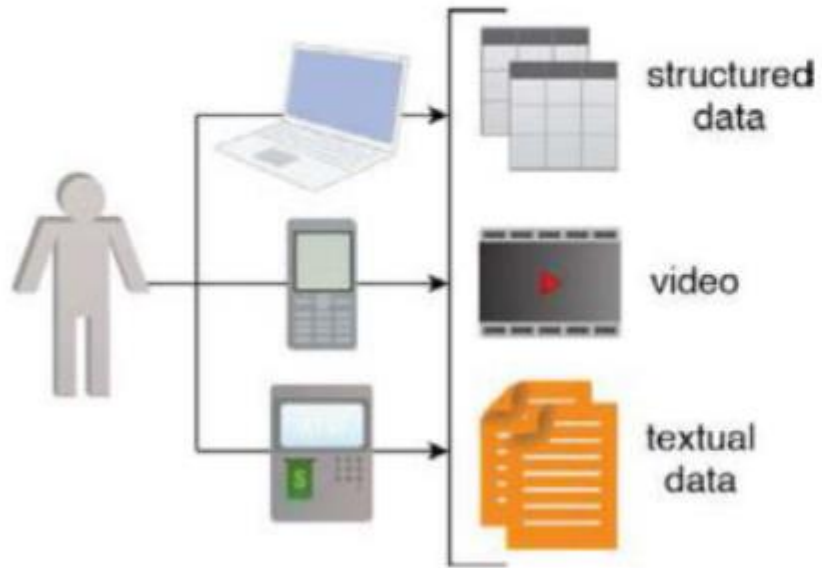
TRANSFORMING INDUSTRIES AND INNOVATION

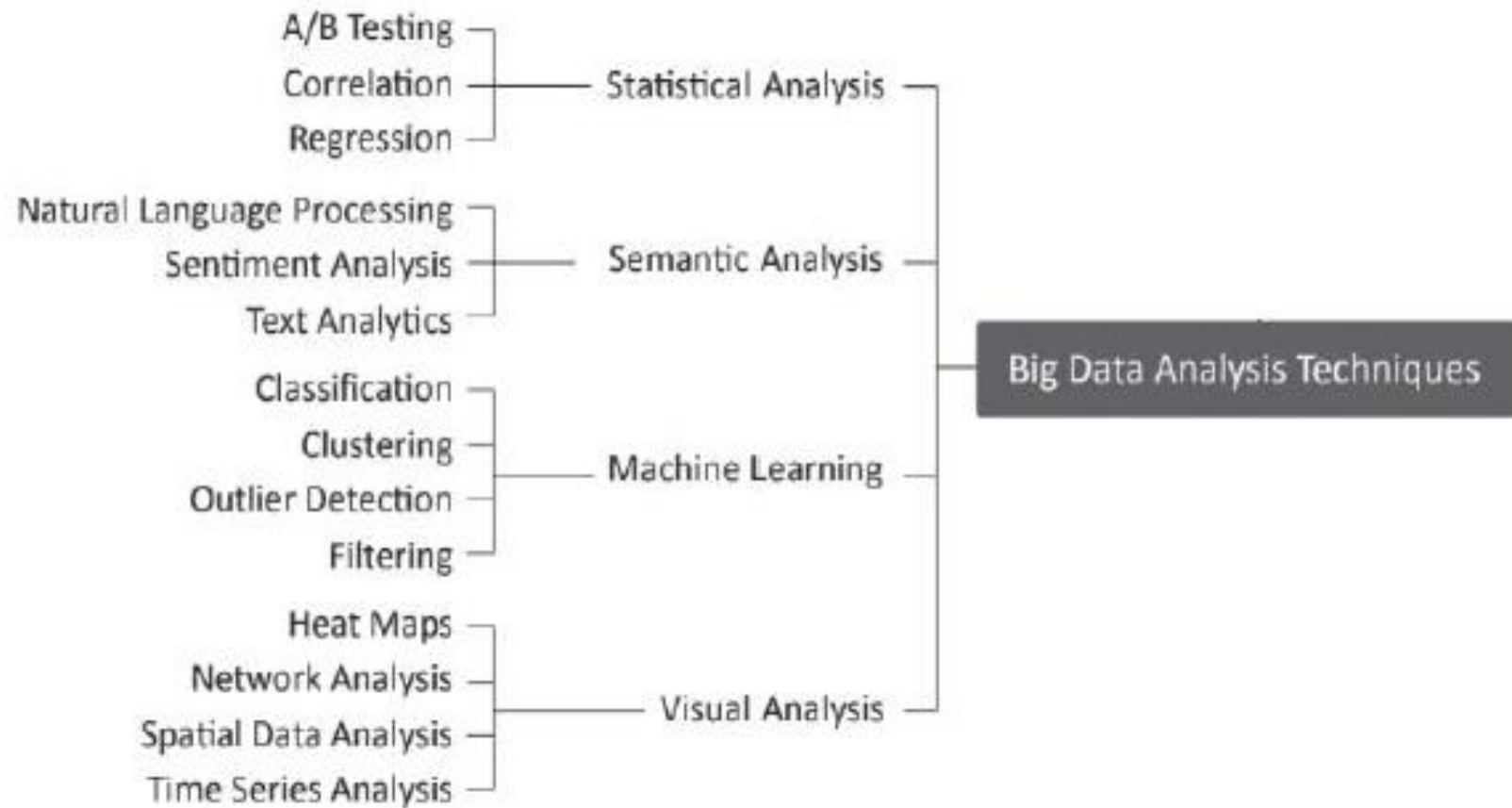




Big Data Sources

human-generated
machine-generated





TYPES OF PREDICTIVE MODELS AND TECHNIQUES

LINEAR MODELS



Linear models and linear regression techniques are the most fundamental methods for predictive modeling. These models describe the relationship between two or more independent variables.

GENERALIZED ADDITIVE MODELS



Generalized additive models (GAM) are a type of *nonparametric* regression, meaning that it does not confirm to any assumptions, as is the case with linear models, which assume linearity.

LOGISTIC REGRESSION



Logistic regression is used to model the relationship between a categorical dependent variable and one or more response measures, by predicting the probability that a case belongs to a target class.

SURVIVAL ANALYSIS



Survival analysis is a group of techniques that models the time duration until one or more events happen. It is sometimes referred to as reliability or duration analysis.

DECISION TREE LEARNING



Decision tree learning is a class of methods where the output is a list of rules that progressively segment the population into smaller, homogeneous groups.

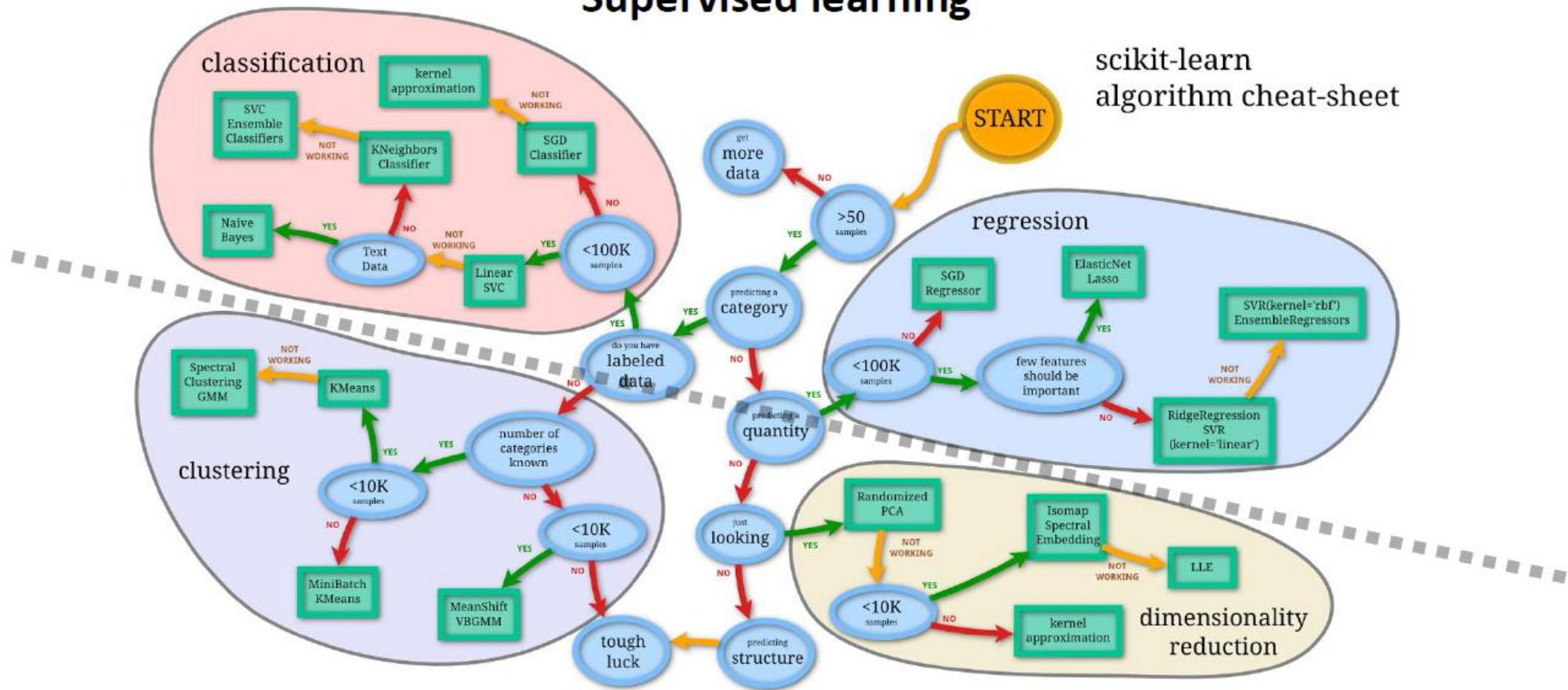
BAYESIAN METHODS



Bayesian methods are a group of techniques based on Bayes' rule, where the probability of an event is conditional based on different relationships between events.

Machine Learning

Supervised learning

scikit-learn
algorithm cheat-sheet

Unsupervised learning

Thank you!



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HAVE CELEBRATED 50 YEARS
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FOR DEVELOPMENT

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