WHY
you need it

require well-organized and relevant raw data stored in a digital format

and dashboards to gain business insights

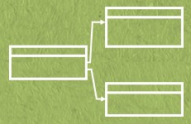
future scenarios by using advanced statistical methods

intelligence to predict behavior in unprecedented ways

WHAT
techniques are involved

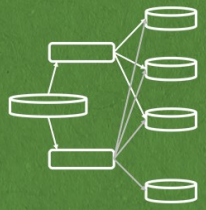
DATA COLLECTION
PREPROCESSING
- class labeling *(categorical vs numerical)*
- data cleansing
- dealing with missing values

CASE SPECIFIC
- e.g. balancing & shuffling datasets



DATA COLLECTION
PREPROCESSING
- class labeling *(number, text, digital images, digital video data, digital audio data)*
- data cleansing
- dealing with missing values

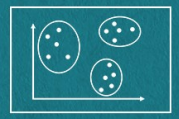
CASE SPECIFIC
- text data mining, confidentiality - preserving data mining techniques



ANALYZE THE DATA
EXTRACT INFO AND PRESENT IT IN THE FORM OF:
- metrics
- KPIs
- reports
- dashboards

REGRESSION

LOGISTIC REGRESSION
CLUSTERING



FACTOR ANALYSIS
TIME SERIES

SUPERVISED LEARNING
- SVMs
- NNs
- deep learning
- random forests
- bayesian networks

ML

UNSUPERVISED LEARNING
- k-means
- deep learning

REINFORCEMENT LEARNING
similiar to supervised learning, but instead of minimizing the loss, one maximizes reward

WHERE

BASIC CUSTOMER DATA
HISTORICAL STOCK PRICE DATA

SOCIAL MEDIA
FINANCIAL TRADING DATA

PRICE OPTIMIZATION
INVENTORY MANAGEMENT

USER EXPERIENCE (UX)
SALES FORECASTING

FRAUD DETECTION
CLIENT RETENTION

HOW
using what tools

PROGRAMMING LANGUAGES
R, Python, SQL, MATLAB

SOFTWARE
Excel

PROGRAMMING LANGUAGES
R, Python, Java, Scala

SOFTWARE
hadoop

PROGRAMMING LANGUAGES
R, Python, SQL, MATLAB

SOFTWARE
Excel, Power BI, sas

PROGRAMMING LANGUAGES
R, Python, MATLAB

SOFTWARE
Excel, IBM SPSS

PROGRAMMING LANGUAGES
R, Python, MATLAB, Java, JavaScript, C, Scala, C++

SOFTWARE