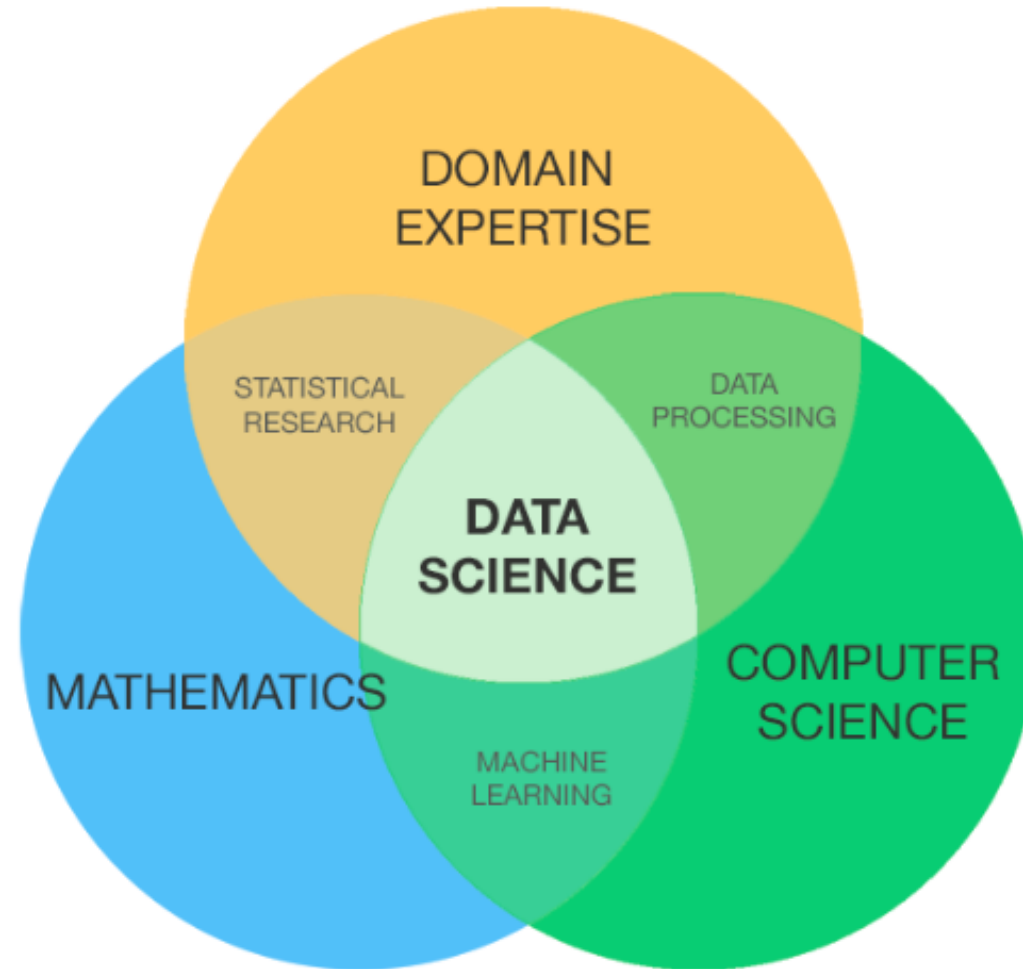
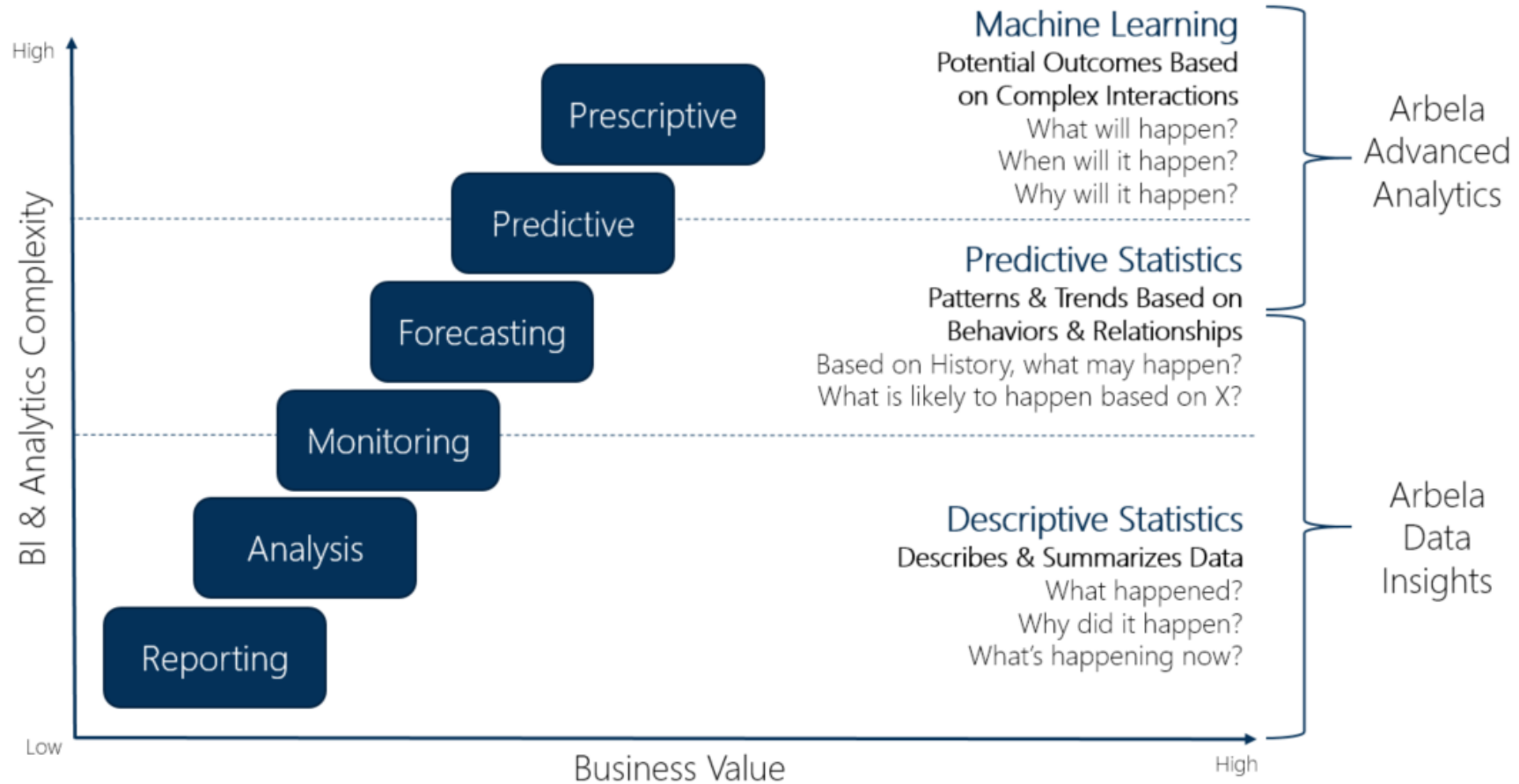


Data Science



*Source: Palmer, Shelly. Data Science for the C-Suite.
New York: Digital Living Press, 2015. Print.*

Data Science



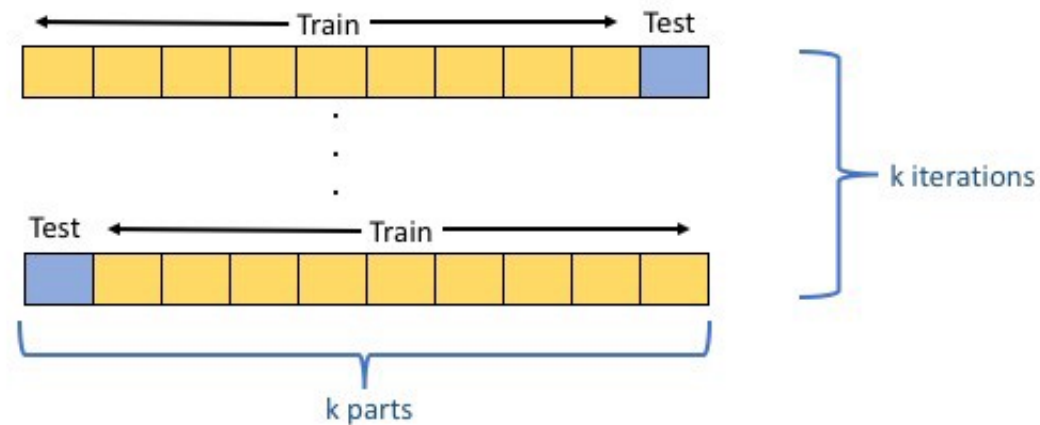
Data Science

ML Tasks <i>Broad Categories</i>	<i>Supervised</i>	<i>Unsupervised</i>
Discrete	Classification Computer vision Image Classification Speech, handwriting recognition Drug discovery	Clustering K-means, mean-shift Large-scale clustering problem Hierarchical clustering, GMM
Continuous	Regression Computer vision Object Detection Linear, logistic regression	Reduction of Dimensionality PCA, LDA (Kernel) Density Estimation

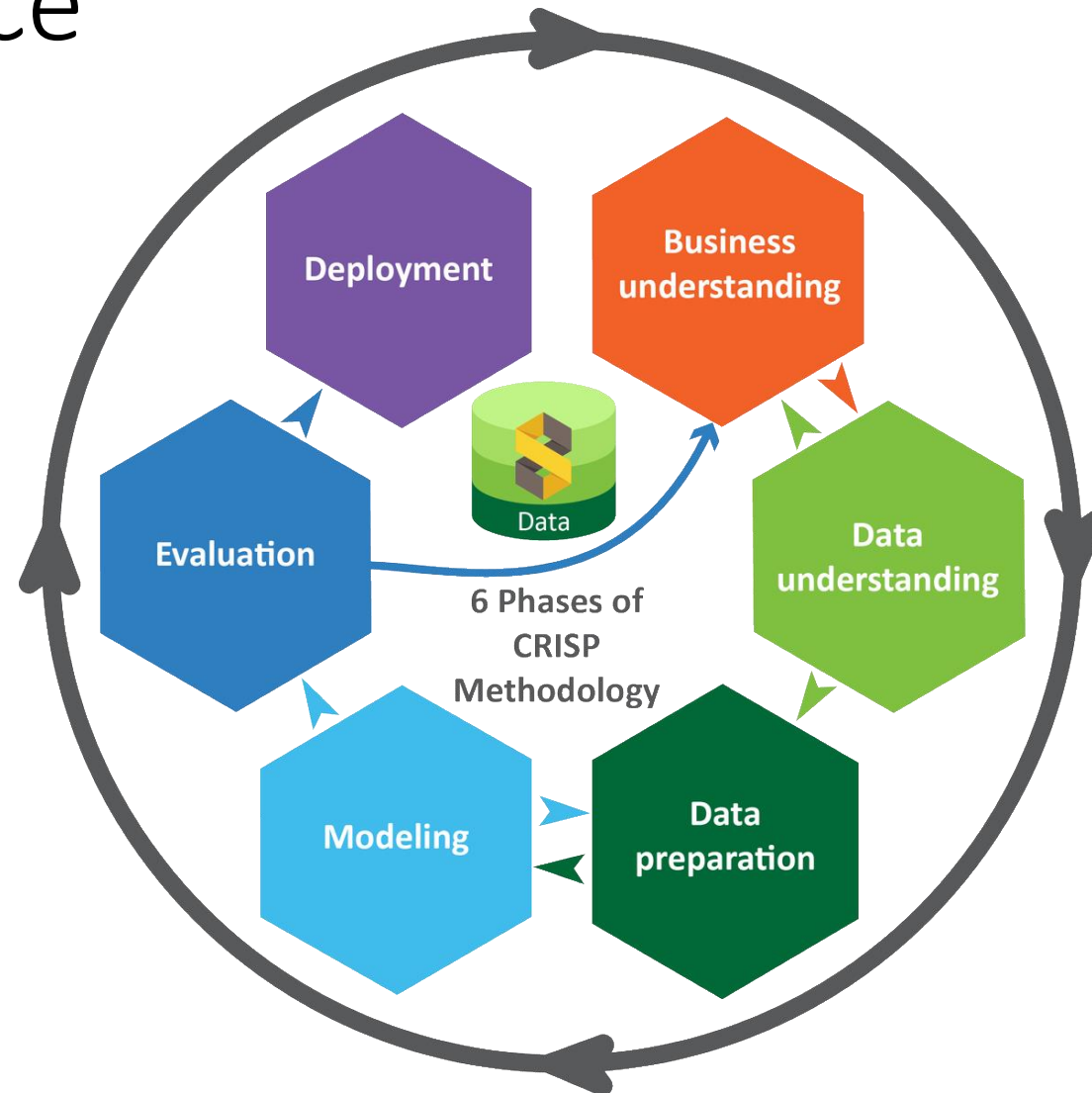
Data Science

K Folds Cross Validation Method

1. Divide the sample data into k parts.
2. Use $k-1$ of the parts for training, and 1 for testing.
3. Repeat the procedure k times, rotating the test set.
4. Determine an expected performance metric (mean square error, misclassification error rate, confidence interval, or other appropriate metric) based on the results across the iterations



Data Science



Project: automatic personality assessment

- Research and instrument development
- Collaboration between LTP and VU University (Reinout de Vries, Ph.D.)
- The HEXACO Personality Inventory (Kibeom Lee, Ph.D., & Michael C. Ashton, Ph.D.)



Honesty



Emotionality



Xtraversion



Agreeable



Conciousness



Openness

Project: automatic personality assessment

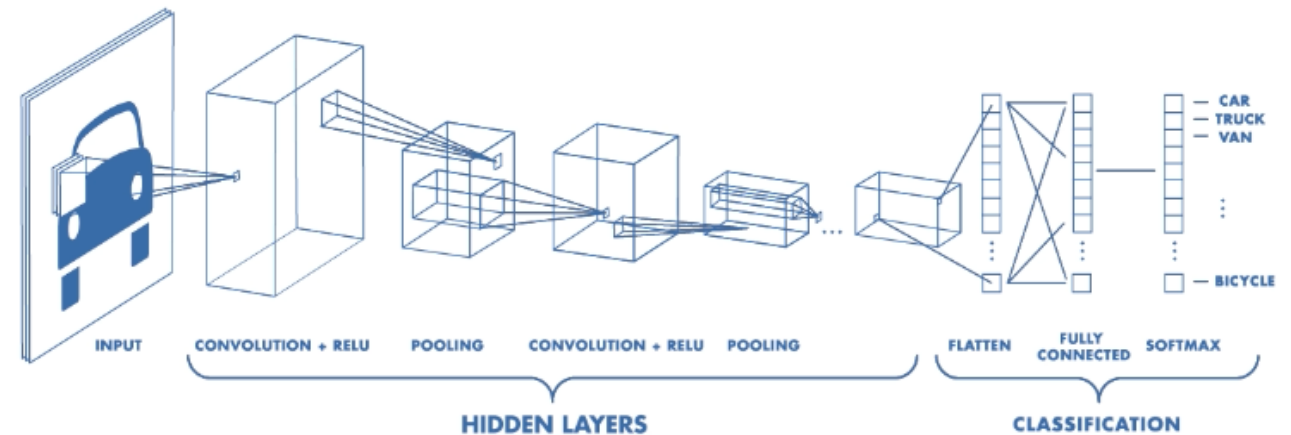
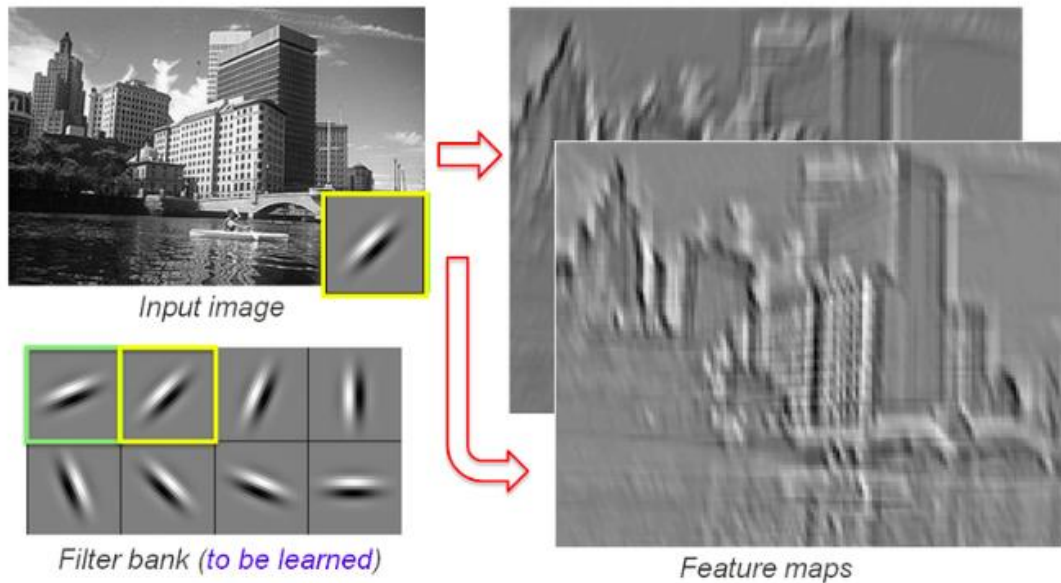
- Focus on:
 - Non verbal (facial expression)
 - Para verbal (voice)
 - Verbal (content)

Non verbal (facial expression)

- Using convolutional neural networks (CNNs)

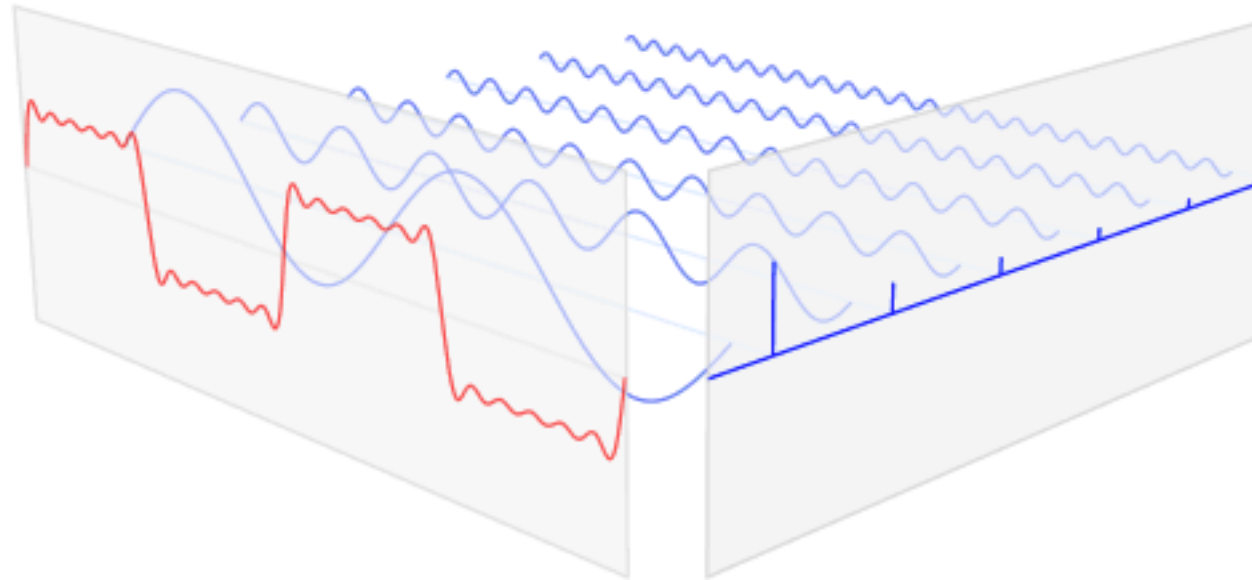


Source: <https://www.kaggle.com/c/emotion-detection-from-facial-expressions>



Para verbal (voice)

- Using Fourier transformation



Verbal (content)

- Using personality analysis software

Text-Level Personality Analysis

Wat betreft invloed uitoefenen, daar heb ik geen behoefte aan. Ik ben vooral effectief als ik alleen ergens aan kan werken.

Dutch

Send

Trait Type	Trait Value	Confliction Value	Trait Label	Confliction Label
Conscientiousness	0.26	0.19	mildly positive	slightly conflicting
Extraversion	-0.14	0.19	mildly negative	slightly conflicting
Agreeableness	0.19	0.19	mildly positive	slightly conflicting
Emotionality	-0.19	0.19	mildly negative	slightly conflicting
Openness	0	0	neutral	no confliction
Integrity	0.22	0.19	mildly positive	slightly conflicting