



Berner Fachhochschule
Haute école spécialisée bernoise
Bern University of Applied Sciences

CAS Practical Machine Learning Introduction

Project: Naive Bayes with Python

Prof. Dr. Jürgen Vogel (juergen.vogel@bfh.ch)

Naïve Bayes (NB)

NB via scikit-learn

- documentation
 - http://scikit-learn.org/stable/modules/naive_bayes.html
 - http://scikit-learn.org/stable/modules/generated/sklearn.naive_bayes.GaussianNB.html
 - http://scikit-learn.org/stable/modules/generated/sklearn.naive_bayes.MultinomialNB.html
 - http://scikit-learn.org/stable/modules/generated/sklearn.naive_bayes.BernoulliNB.html
- datasets
 - Iris (Gaussian NB)
 - http://scikit-learn.org/stable/modules/generated/sklearn.datasets.load_iris.html
 - handwritten digits (Gaussian NB)
 - http://scikit-learn.org/stable/modules/generated/sklearn.datasets.load_digits.html
- evaluation
 - manually split dataset into training (80%) and test data (20%) and calculate accuracy
 - random split via http://scikit-learn.org/stable/modules/generated/sklearn.model_selection.train_test_split.html
 - accuracy via `score()` method of estimator
 - run cross validation http://scikit-learn.org/stable/modules/cross_validation.html
 - compare results with Decision Tree classifier (project 2)