

overfitting&underfitting

留出法: hold-out

交叉验证法: cross validation

自助采样: bootstrap sampling

偏差-方差窘境 (bias-variance dilemma)

泛化误差 (generalization error)

分层采样 (stratified smpling)

单位跃阶函数unit-step function

广义瑞利商 generalized Rayleigh quotient

多层前馈神经网络multi-layer feedforward neural

拉普拉斯修正 (Laplacian correction)

NFL: No Free Lunch

TPR: True Positive Rate

FPR: False Positive Rate

LOO: leave-one-out留一法

ROC: Receiver Operating Characteristic受试者工作特征

SVM: Support Vector Machine

AUC: Area Under ROC Curve: ROC曲线下的面积

MSE: Mean Square Error均方误差

RF: Random Forest

LDA: Linear Discriminant Analysis

FDA: Fisher Discriminant Analysis

PCA: Principal Component Analysis

RKHS: Reproducing Kernel Hilbert Space再生核希尔伯特空间

CNN: Convolutional Neural Network

RNN Recurrent Neural Network

PAC: Probably Approximately Correct概率近似正确

BP: BackPropagation误差逆传播

ECOC: Error Correcting Output Codes纠错输出码

CART: Classification and Regression Tree著名决策树算法

BEP: Break-Event Point 平衡点

BCE: Binary Cross-Entropy二元交叉熵

RBF: Radial Basis Function (径向基函数) 分类任务中除BP最常用

NCM: Nearest Class Mean最近类中心分类器

KL: (Kullback-Leibler divergence散度)

CC: Cascade-Correlation (级联相关)

SGD: stochastic (随机) gradient decent随机梯度下降

SMO: Sequential (顺序) Minimal Optimization

SOM: Self-Organizing feature Map (自组织特征映射) 最常用聚类方法之一

EM(Expectation-Maximization)

VDM (Value Difference Metric)计算无序属性距离

LVQ (Learning Vector Quantization)学习向量量化

GMM (Gaussian Mixture Model Clustering)高斯混合聚类

Bagging: Bootstrap AGGregateING

MLE: Maximum Likelihood Estimation

MAP: Maximum A Posteriori (priori先验)

i.i.d: independent and identical distributed独立同分布

NCA Neighbourhood Component Analysis近邻成分分析

为了完整性:

KKT: Karush-Kuhn-Tucker

ReLU (Rectified Linear Units)技巧: 将 Sigmoid 激活函数修改为修正线性函数

ART: Adaptive Resonance Theory自适应谐振理论网络

ODE: One-Dependent Estimator独依赖估计: 假设每个属性在类别外最多仅依赖一个其他属性

AODE (Averaged One-Dependent Estimator)

有向无环图(DAG, Directed Acyclic Graph)

条件概率表 (CPT, Conditional Probability Table)

最小描述长度 (MDL, Minimal Description Length)

多响应线性回归 (Multi-response Linear Regression, 简称 MLR)

贝叶斯模型平均 (Bayes Model Averaging, 简称 BMA)

Jaccard系数 (Jaccard Coefficient, 简称 JC)

FM指数 (Fowlkes and Mallows Index, 简称FMI)

Rand 指数 (Rand Index, 简称 RI)

DB指数 (Davies-Bouldin Index, 简称DBI)

Dunn指数 (Dunn Index, 简称 DI)