



数据挖掘和基于内容的图像检索及其应用 (Data Mining and content-based image retrieval)

承担国家863项目2项，企业应用项目3项，获教育部科技进步奖1项、上海市技术发明奖1项、上海市自然科学奖1项，指导的1篇博士论文获全国百篇优秀博士论文，发表SCI论文40多篇，他引超过200次。出版专著教材2本。

1. 数据挖掘算法软件平台
(software tool for data mining)
2. 数据挖掘应用
(Applications of data mining)

1) 生物信息学(Bioinformatics)

- (1) SARS DNA Sequence Analysis
- (2) Using Fourier spectrum analysis and pseudo amino acid composition for prediction of membrane protein types
- (3) Prediction of protein signal sequences and their cleavage sites based on statistical rulers
- (4) Supervised Clustering Algorithm for Prediction of Protein Structure
- (5) Predicting membrane protein types based on Weighted SVM and SLLE

2) 炼钢工业流程控制的优化

(optimization of control in steel industry)

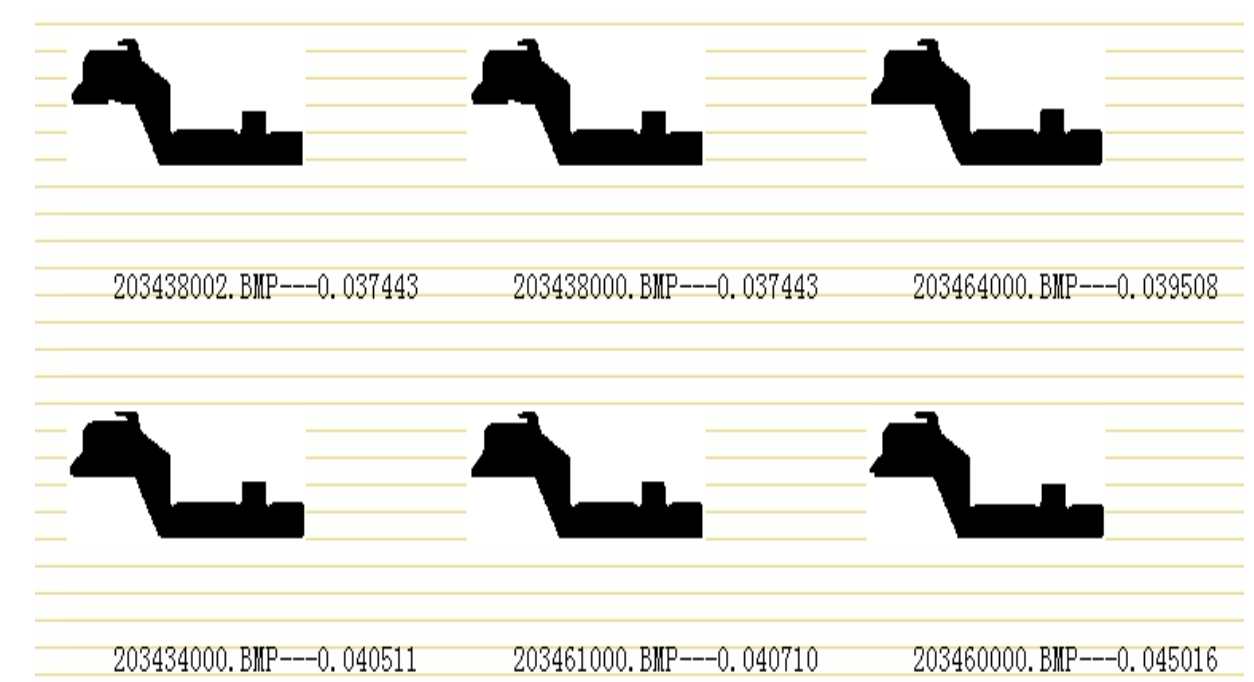
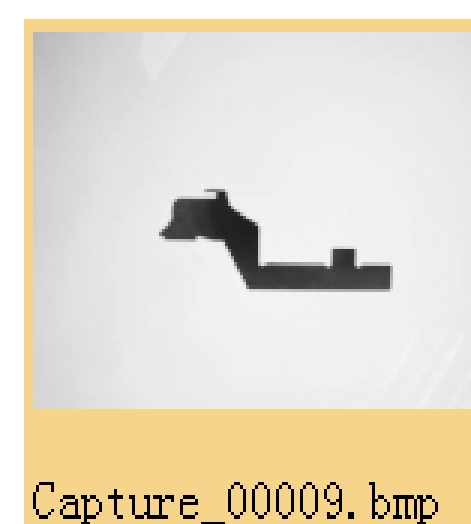
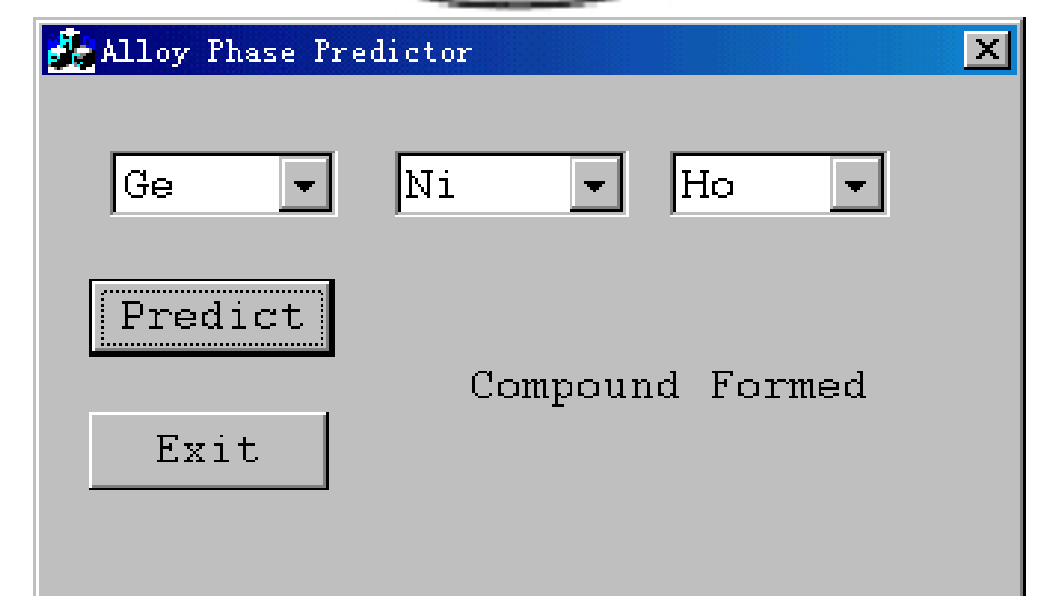
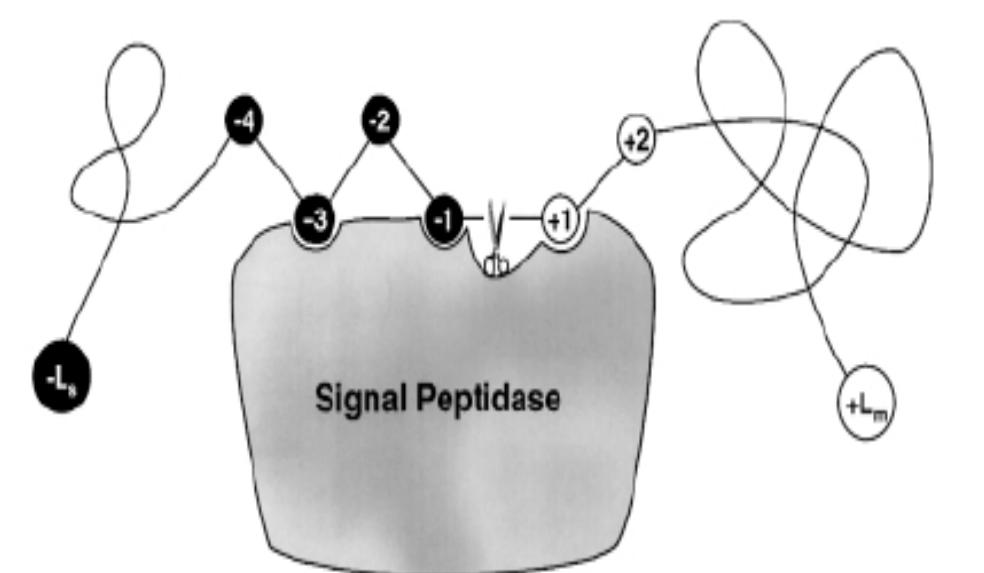
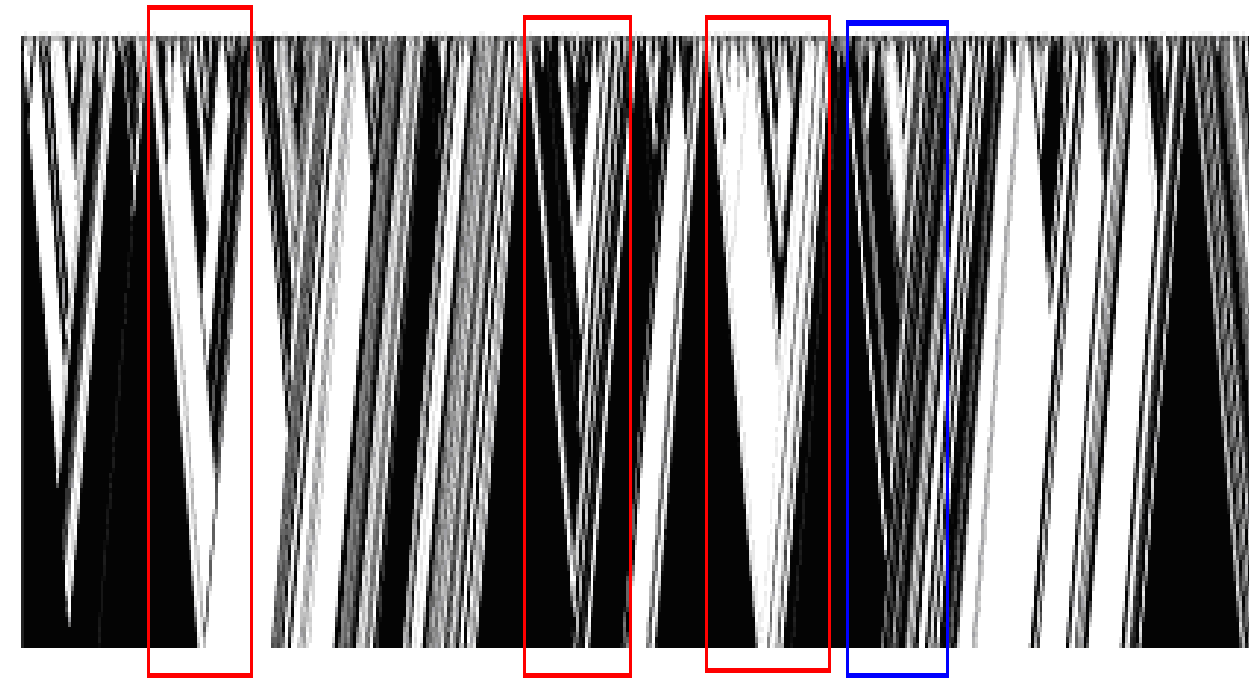
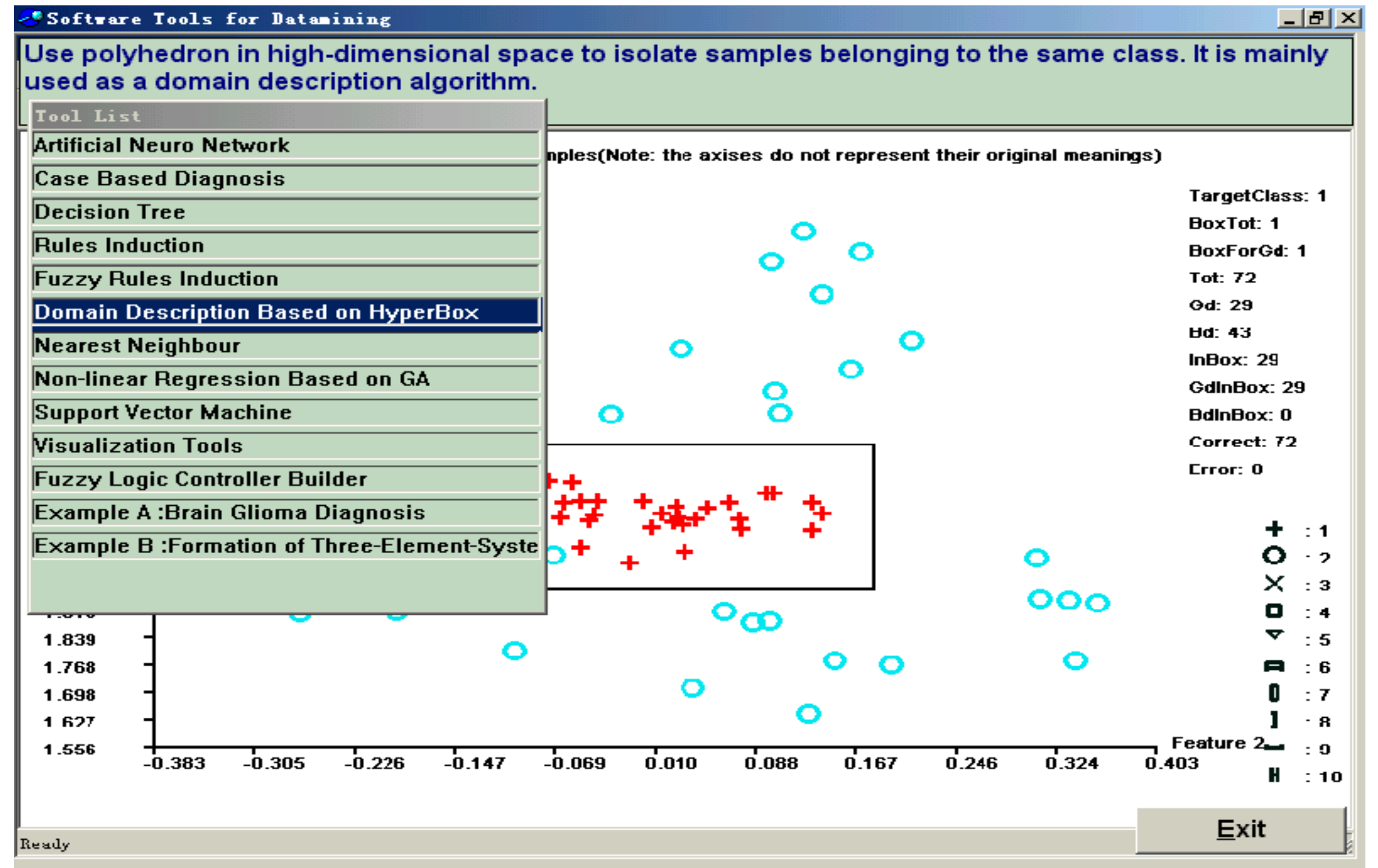
3) 三元合金化合物的新材料预报 (Prediction of regularities of the formation of ternary intermetallic compounds)

4) 脑胶质瘤的辅助诊断(diagnosis of brain glioma)

Rule_A2: Age in (34~59) AND Mass Effect in (Middle, Heavy) AND Post-Contrast Enhancement in (Heterogeneous) AND Blood Supply in (Affluent) AND Hemorrhage in (Absent, Acute) THEN High-grade glioma

3. 基于内容的图像检索(Content-based image retrieval)

- 1) 应用于蔬菜病虫害的远程诊断
- 2) 应用于纺织织针的快速检索
- 3) 应用于基于手机的图像检索



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