范忠瑞

E-Mail：fanzhongrui@ict.ac.cn　　　　电话：13126666174

求职意向

数据挖掘研发工作；软件开发工作

教育背景

2014.9-2017.7	中国科学院计算技术研究所	计算机应用技术	工学硕士
2010.9-2014.7	郑州大学	计算机科学与技术	工学学士 **Top 20%**

项目经历

2014.8-至今　　　　电子数据侦察系统　　　　　　　　专项技术研究中心项目组　　　　　　核心开发人员

◆ *项目介绍*：接收海事情报，通过数据分析手段获取海事信息，辅助打击海上走私犯罪。

◆ *负责工作（独立完成）*：
- 多数据源的数据规整化，实现各项服务接口，完成数据分析功能；
- 分析海事情报，挖掘舰艇船只之间的相似关系，为识别敏感船只目标提供核心依据。

◆ *主要方法*：
- 采用**决策树算法**对船舶数据进行船舶特征和轨迹特征抽取，主要依据候选船舶特征与现有敏感船舶特征参数库；
- 利用抽取的船舶特征和轨迹特征，采用**朴素贝叶斯算法**进行船只分类；
- 提取观测船只与特征库船只的比较关系，完成观测船只的匹配结果。

◆ *工作成果*：船只分类准确率：91%，召回率：90%；船舶相似匹配准确率：90%。

2015.5-至今　　　　船舶水运信息平台　　　　　　　　专项技术研究中心项目组　　　　　　核心研发人员

◆ *项目介绍*：综合多方数据，分析获取海上交通信息，预测海运与经济走势相关度。

◆ *负责工作（独立完成）*：
- 从不同数据源获取船舶水运信息，进行数据集合并；
- 找出海上航运主要路线，实现航道发现；
- 挖掘船舶和航道联系，用以识别船队及分析船舶异常。

◆ *主要方法*：
- 采用**决策树算法**从整合清理过的航运数据库中提取轨迹特征，从船舶数据库中抽取船舶特征；
- 使用**层次聚类算法**聚类，对轨迹数据进行过滤；
- 对过滤后的轨迹数据应用 **DBSCANN 算法**进一步聚类，分析子航道属性，将聚类结果总结入库；
- 根据船舶特征和轨迹聚类结果，建立船队和子航道的对应关系。

◆ *工作成果*：子航道识别准确率：96%，船舶航道对应准确率：90%。

实习经历

2013.7-2013.9　　　　实现景区评价的 Web 应用　　　　　　西安行知汇元软件开发有限公司　　　　　　研发工程师

◆ *项目介绍*：使用 Java SSH 框架基于 MVC 模式设计实现能对景区进行评论分享的 Web 应用。

获奖情况

◆ 2011.10　优秀学生奖学金**(Top　10%)**

◆ 2012.05　河南省程序设计大赛铜奖

个人技能

■ 熟悉 Java，C/C++， Python	■ 熟悉基本数据挖掘理论和方法	■ 熟悉基本数据结构和算法
■ 熟练使用 Hadoop，Storm	■ 英语：通过 CET-6	

Zhongrui Fan

Mobile: (+86)13126666174   E-Mail: fanzhongrui@ict.ac.cn

Objective

Data Mining Engineer, Software Engineer

Education

2014.9 - 2017.7	Master	Institute of Computing Technology, Chinese Academy of Sciences	Compute Application Technology	
2010.9 - 2014.7	Bachelor	Zhengzhou University	Computer Science and Technology	**Top20%**

Project Experience

2014. 8- now　　**Radar Electronic Data Target Recognition System**　　**Special Technology Research Center**　　**Designer & Developer**

- *Project Description:* Receiving maritime information, obtain maritime information through data analysis, and assist in combating maritime smuggling crime.
- *Personal Responsibilities:*
  - Data normalization of multi-source, and realization of service interface to complete data analysis;
  - Analysis of maritime intelligence, and mine the similar relationships between vessels to provide the core basis for the identification of sensitive vessels.
- *Major methods:*
  - Adopt **Decision Tree Classification Model** to extract vessel features and the characteristics of trajectory, based on the features of the candidate ships and the characteristic parameter of existing ships;
  - Using Naïve Bayesian algorithm to classify the vessels, according to the characteristics of ships and trajectory;
  - Extract the comparative relationship between the observed ships and ships in storage, and finish the matching result of observed vessels.
- *Results:* Vessel classification accuracy rate: 91%, Recall rate: 90%, Accuracy rate of ship similarity matching: 90%.

2015.5 - now　　**Ship water transport information platform**　　**Special Technology Research Center**　　**Designer & Developer**

- *Project Description:* Retrieve multi data sources, analysis and get maritime traffic information, forecast the correlation between maritime traffic and economic trend.
- *Personal Responsibilities:*
  - Get ships information from different data sources and merge data set;
  - Find out main lines of shipping in the sea, and realize the discovery of the channel;
  - Mine links between ships and channels to identify the fleet and analysis of abnormal ships.
- *Major methods:*
  - Extract ship feature of trajectory from the integrated and clean shipping database, and the vessel features from vessel data set by **Decision Tree algorithm**;
  - Use **hierarchical clustering algorithm** to cluster and filter the trajectory data;
  - Adopt **DBSCANN algorithm** to further cluster the data, do analysis of sub channel attributes and sum up the clustering results;
  - Establish the corresponding relationship between fleet and sub channel, based on the clustering results of ship characteristics and trajectory.
- Results: Sub segment recognition accuracy: 96%, Accuracy rate of matching between ship and channel: 90%.

Internship Experience

2013.7- 2013.9　　**Web application of evaluation of scenic spots**　　**Xi'an Xingzhi Yuan**　　**Designer & Developer**

- *Project Description:* realize a Web application to review and share science based on MVC Pattern, using SSH Java framework.

Awards

- Excellent Scholarship for Encouragement (**top 10%**).
- Bronze Medal at Henan Province Programming Contest.

Personal skills

- Familiar with Java, C/C++, Python
- Familiar with basic machine learning theory and practice
- Familiar with data structure and algorithm
- Familiar with Hadoop and Storm practice
- English: CET-6