

Objective

To obtain a Software Developer or Data Science position for New Graduate

Summary

I am currently a full-funded thesis-based Master (MCS) student, under the supervision of Prof. Stan Matwin, in Dalhousie University. I am expected to graduate in August 2015. I am an open-minded and self-motivated person with strong team work spirit and great enthusiasm for Data Mining, Machine Learning and Big Data Analytics.

Education Background

- 09/2013- **Master of Computer Science**, *Dalhousie University*, Canada.
current GPA: 4.00/4.3
- 09/2009- **Bachelor of Engineering in Software Engineering**, *Sichuan University*, China.
07/2013 Overall GPA: 3.32/4.0; Major GPA: 3.6/4.0

Selected Projects

- 06/2014- **Effects of Large Marine Protected Areas on Global Fisheries**, *Institute for Big Data Analytics*, Canada.
current
- Focus on modeling fishing patterns from the view of Machine Learning
 - Analyse and model fishing behaviours by time series analysis, clustering algorithm (e.g. DBSCAN) and various classification techniques (SVM, C5.0, Naive Bayes, Random Forest etc.)
- 09/2013- **Intelligent Maritime Solutions From AIS Satellite**, *Institute for Big Data Analytics*, Canada.
current
- A joint project between Canada and Brazil sponsored by ISTP
 - Involves clustering, anomaly detection techniques, AIS data features extraction and other machine learning algorithms
 - Proposed one novel density-based trajectory clustering algorithm for normal maritime lanes generation
 - Developed one unsupervised framework for maritime traffic anomaly detection
- 12/2011- **Collection and Visualization of Android Users' Phone Usage Habits Data**, *Sichuan University*, China.
03/2012
- Aimed to visualize individuals' cellphones usage habits and help consumers reduce the reliance on their phones
 - Implemented an Android-based system with SQLite3, AChartEngine, RenRenAPI.
 - Attracted over 20,000 users in the first 2 months after publication
 - Won the National Third Prize in Public Welfare Programming Competition of Baidu AStar Programming Contest.

Work Experience

- 09/2013-cur **Research Assistant**, *Institute for Big Data Analytics*, Halifax, Canada.
- Mainly • Research and implement machine learning and statistical techniques to create scalable and
Involved effective models in various research projects
- Problem definition, literature reviews, data preprocessing, features extraction, model development, model validation and model implementation
- 09/2014-cur **Teaching Assistant**, *Dalhousie University*, Halifax, Canada.
- Courses • Introduction to Database System, CSCI2141 (Fall 2014)
- Data Mining and Data Warehousing, CSCI4144/CSCI5405 (Winter 2014)
- 06-08/2012 **Intern**, *ChinaSoft International*, Chongqing, China.
- Mainly • Appointed as technical leader for a development group with 8 members and Developed an
Involved enterprise's financial management system based on J2EE
- Responsible for database design and realization of back-end's core code
 - Required to communicate with clients and offer help to other team members.

Publications

- 10/2014 Bo Liu, Erico N.de Souza, Stan Matwin, and Marcin Sydow, **Knowledge-based Clustering of Ship Trajectories Using Density-based Approach**, in *Proceedings of IEEE International Conference on Big Data (IEEE BigData 2014)*, 27-30 October 2014, Washington, DC, USA.
- 10/2014 Robert Warren and Bo Liu, **Language, Cultural Influences and Intelligence in Historical Gazetteers of the Great War**, in *Proceedings of IEEE International Conference on Big Data (IEEE BigData 2014)*, 27-30 October 2014, Washington, DC, USA.
- 10/2014 Xiaoguang Wang, Xuan Liu, Bo Liu, Erico N. de Souza, and Stan Matwin, **Vessel route anomaly detection with Hadoop MapReduce**, in *Proceedings of IEEE International Conference on Big Data (IEEE BigData 2014)*, 27-30 October 2014, Washington, DC, USA.
- 04/2015 Bo Liu, Erico N. de Souza, Cassey Hilliard and Stan Matwin, **Ship Movement Anomaly Detection Using Specialized Distance Measures**, in *Proceedings of 18th IEEE International Conference on Information Fusion (FUSION 2015)*.

Honors and Awards

- 09/2013 **Graduate Scholarship** *Granted by Dalhousie University*, Two Years.
- 10/2012 **Third Comprehensive Scholarship** *Granted by Sichuan University*.
- 08/2012 **National Third Prize in Public Welfare Programming Competition of Baidu AStar Programming Contest**. *The competitors are from 127 universities of China*.
- 11/2011 **First Individual Prize of Scholarship** in Sichuan University.

Certificates

- 02/2014 Obtained certificate of *Data Mining with R* after finishing the course taught by Dr.Luis Torgo
- 09/2011 Obtained *IBM UML certificate* for completion of Software Development Environments And Tools

Skills

Java, R, SQL, Python, Unix, Android Programming, J2EE, Latex, UML