Jin Ruan

CONTACT

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EDUCATION

University of Wisconsin - Madison Sep. 2013 - May 2016
M.S., Computer Science, GPA: 3.91/4.00
M.S., Industrial Engineering, GPA: 3.88/4.00

Sun Yat-sen University, Guangzhou, China Sep. 2008 - June 2012
B.E., Traffic Engineering (Intelligent Transportation), GPA: 3.7/4.0

SKILLS

Languages: Java, Python, C/C++, SQL, HTML, CSS, R
Web Development: JSP, Apache Struts 2, Apache Tomcat, Bootstrap
Back-End: MySQL, Docker, AWS
Big Data: Hadoop, HDFS, Apache Hbase

PROJECT EXPERIENCE

Movie Recommender System June 2016 - Aug. 2016
- Built a movie recommender system based on Item Collaborative Filtering using Hadoop MapReduce in Java.
- Generated a personalized recommendation list of movies for over 480 thousand users from 17 thousand movies by running the system on Amazon Elastic MapReduce service.
- Applied Mapper-Join in MapReduce to solve the Out-of-Memory problem caused by the huge movie co-occurrence matrix.

Data Matching for Restaurants from Yelp and Yellow Pages Sep. 2015 - Dec. 2015
- Built a Python crawler to crawl HTML data, extracted the information into two relational tables using Beautiful Soup library.
- Reduced the number of candidate pairs from 280 million to 21 thousand by performing rule-based blocking with Jaccard Index, etc.
- Achieved 0.94 precision rate, 0.97 recall rate on matching the two tables using Random Forest in Python.

Food Paradise - Restaurant Rating Web Application Feb. 2015 - May 2015
- Built a web application that allows users to search and rate restaurants based on Apache Struts 2 framework in Java.
- Utilized MySQL as back-end database and developed a responsive website using Bootstrap framework.

Identifying the Zygosity Status of Twins Feb. 2015 - May 2015
- Used Estimation-Maximization algorithm on Bayes Network to infer the zygosity status for each pair of twins based on 15,000 patient medical records in Java.
- Identified 318 out of 9817 diseases that correlate with zygosity status by conducting a two-sample t-test for the concordance rates between identical and fraternal twins for each disease.

Parallel Seam Carving for Video Retargeting Feb. 2016 - May 2016
- Proposed a new video retargeting algorithm based on carving discontinuous seams in time that is scalable for large videos.
- Implemented and parallelized the algorithm using OpenCV in C++ and achieved 1.8 fps on 400x300 video compared to 0.2 fps for our implementation of the original seam carving video retargeting algorithm.

PATENT

1. Hui Zhang, Xiaoqiang Zhang, **Jin Ruan**, Manxia Liu. "Self-adaptive Video Synchronous LED Lighting Device". Publication number: CN202713746 U.