Baixi Sun 孙百西

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SKILLS

- **Language**: Java, Matlab, Python, C#, C++, C, JavaScript, , SQL.
- **Frameworks**: Hadoop, Spark, pySpark, SparkSQL, SpringMVC, myBatis, .NET.
- **Techniques**: TensorFlow APIs, Matlab tensor toolbox, Matlab CMTF toolbox, parallel programming by using OpenMPI, Ajax, IIS server web developing, Tomcat Server web deploying, Aspect Oriented Programming (AOP).
- **Systems familiar with**: Linux, MacOS, Windows 10, Windows Server.
- Abilities to read and understand Software design documents, PRD (Product Requirement Document), SOW (Statement of Work) and Testing Reports.
- Abilities to develop by standards and base on documents.

EDUCATION

Master of Computer Science and Engineering (CS MS)   Sept. 2018- Jun. 2020
- University of California, Riverside   Riverside, California

Bachelor of Software Engineering (B.E.)   Aug. 2014-Jun. 2018
- Harbin Engineering University   Harbin, China

RESEARCH & Job EXPERIENCE

(course project) Twitter Trending Detection via Spark, Doc2Vec and SVM | Riverside, California   Oct. 2019-Now
Implemented the embedding and classifying part
- Utilized Spark framework to process the data, including preprocessing and storing the data.
- Parsed the output of Spark and embedded user comments into vectors via Doc2Vec.
- Obtained labels and implemented a semi-supervised method to generate a training model.
- Designed experiments to adjust parameters on the learning layers.
- Utilized SVM to classify user comments by the model we got and aggregate them by platform (i.e. Twitter, Reddit).

(research project) Misinformation Detection via Tensor Embeddings | Riverside, California   Sept. 2019-Now
Utilize methods to embed information into tensor and extract article features (MATLAB)
- Embedded words' distance information to a 3-mode tensor and utilize Canonical Polyadic to decompose the tensor.
- Designed another method that embedding words' distance and their appearance order information to a 4-mode tensor.
- Implemented and compared different decomposition methods on the tensor, to get a better accuracy.
- Designed experiments to find the best parameter for generating tensor and tensor decomposition.

(course project) Search Engine based on Lucene framework | Riverside, California   Feb. 2019-Mar.2019
Implemented Lucene indexing part and query algorithm
- Parsed the data that obtained from our crawler into org.apache.lucene.document object.
- Implemented modules to preprocess the data (data cleaning, handle missing values, etc.)
- Designed object (Struct) to store and pass the data to different processing algorithms and generated the Lucene index.
- Designed algorithm to remove stop words of the query.
- Designed algorithm to assign weight to each data record and rank the records in decreasing order.
- Implemented the kernel algorithm that search for records via the query and highlight the sentence that includes the query.

(course project) Neural Network based HCCR | Riverside, California   Oct. 2018-Dec. 2018
Implemented part of the algorithm and adjusted parameter of a Handwriting Chinese Character Recognition with CNN
- Conducted the course research and studied the background of the Handwriting Chinese Character Recognition System.
- Processed the dataset into training data and testing data.
- Cleaned the training data to build a better model.
- Utilized CNN and R-CNN for learning and compared their differences.
- Implemented the file parsing module to parse handwriting data image to binary files.
- Adjusted parameters of the kernel algorithm to generate a better model.

(research project) Software Testing Data Optimizing Algorithm| Harbin, China   Apr. 2018
- Implemented a randomized algorithm to generate software testing data.
- Utilized the Genetic Algorithm (GA) to search the code branch and optimize the test data for better branch coverage.
- Designed the fitness algorithm defining regulations to compare test data with the branch to cover.
- Designed the experiments to verify the algorithm and tested its performance.

(research project) Graduate Project | Harbin, China   Dec. 2017-May. 2018
Implemented a Graph Layout Algorithm in Java

- Implemented a novel graph (Social Network collected from Stanford SNAP) layout algorithm in Java
- Utilized BFS to calculate the Euclidean distance and embedded graph into high dimensions.
- Implemented PCA algorithm to project the graph into low dimensions (Decomposition).
- Implemented visualization part by using D3.js

(internship) Aoyun Technology Co. Ltd. | Harbin, China   *Intern Software Engineer*   Jul. 2017-Aug. 2017
Developed APP Web services using C# .NET framework.

- Developed the function to get weather data from website and implemented a visualization method.
- Implemented the Account Managing, Login and Verify via phone message module.
- Developed the WeChat part by using the API from the WeChat platform. Send json to WeChat server via POST method to generate the menu, and use the request method for each menu button to get the web services.

(internship) Neu Soft Co. Ltd. | Dalian, China   *Intern Java Engineer*   Jan. 2017-Apr. 2017
Developed and optimized corporate system based on SpringMVC framework, myBatis, Ajax, and jQuery.

- In PRP setting stage, set module to view project progress and workload, added PRP information.
- Conducted the combination process of back-end and front-end.
- Assisted to debug the salary calculation module.
- Researched, added, and modified project information for project setting module and managed data with Oracle 11
- Applied FreeMaker and HTML in staff setting module, added staff and distributed roles.

(part-time job) 703 Research Lab | Harbin, China   *Software Engineer*   Feb. 2016-Jan. 2017
In charge of developing blueprint storage managing system.

- Developed Java project management application to provide task assigning, issue and bug tracking for developer team.
- Created collaborative work platform including file sharing, working time reporting and task administrating.
- Assisted configuring the air gap for network security and prevent information leakage.
- Applied advanced generic design patterns to the project to adapt solutions to different demands.

(part-time job) Harbin Engineering University PDS Workshop | Harbin, China   Sep. 2015-Feb. 2016
Modified Spare Parts Production Management System based on C#WPF.

- Developed C# Web project management application to provide task assigning, issue and bug tracking for developer team.
- Restructured the program and gave clear annotation to some codes that hard to understand.
- Created collaborative work platform including progress control, quality view and task administrating.
- Applied advanced generic design patterns and frameworks to the project to adapt solutions to different demands.

OTHER EXPERIENCE & SOCIAL WORK

Harbin Radio Station | **Harbin, China**   2015-2018

- Part-time broadcaster and engaged in the radio program which shows excellent volunteer works.

Department of International Students Union of Harbin Engineering University | Harbin, China   2017

- Worked as HSK5 (Test of Chinese language level) volunteer tutor for international students, using English in class to tutor Chinese tests.

Harbin Bank 2016 Harbin International Marathon | **Harbin, China**   2016

- Worked as a volunteer for Harbin Bank 2016 Harbin International Marathon.

AWARDS

- 3rd Prize of Dong Bei Provinces ACM/ICPC Contest   Nov. 2015
- 2rd University Scholarship   May 2017
- 2rd University Scholarship   Sept. 2017
- 3rd University Scholarship   May 2018

HOBBIES

- Coding (Implementing some useful gadgets and some ideas came up in mind…)
- Table Tennis (UCR Table Tennis Club Secretary)
- Basketball, Soccer, Swimming, Snowboarding & Skiing, Hiking
- Listening to music (classic, pop)

SOCIAL MEDIA

- GitHub: https://github.com/Presciman
- Linkedin: https://www.linkedin.com/in/baixi-sun-852005139/