Bin Li

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RESEARCH INTERESTS

Machine Learning, Deep Learning, Computer Vision (Recognition, Detection and Classification Problems)

EDUCATION

South China University of Technology, Guangzhou, Guangdong

M.S., Software Engineering, Sept 2015 to present
- The First Prize Scholarship (2016)
- Advisor: Jian Chen, Ph.D

University of Chinese Academy of Sciences, Huairou, Beijing

Visiting Student, Computer and Control Engineering, Oct 2014 to May 2015
- Studied Mathematics for Computer Science
- Created new functionalities for a state-level tax information system
- Advisor: Jungang Xu, Ph.D

Guangzhou University of Chinese Medicine, Guangzhou, Guangdong

B.S., Computer Science and Technology, Sept 2011 to July 2015
- Ranked 2nd among all undergraduate students, CET-6: 522
- Excellent Intern (2015), Outstanding Graduates (2015)
- The Second Prize Scholarship (four times, 2012-2015)
- Deng Tietao Scholarship (2012)

RESEARCH PROJECT

Cross Validation Optimization for SVM Oct 2015 to Sept 2016

Proposed three algorithms that reuse the hth SVM for improving the efficiency of training the $(h+1)^{th}$ SVM
- The SVM k-fold cross validation is time-consuming
- There are (k-2) common subsets for previous and current SVMs
- The purpose of this project is to efficiently identify the SVs and to accurately estimate the weights of the next SVM

Age Estimation Based on Deep Face Representation Sept 2016 to Jan 2017

Improved the accuracy of age estimation based on DeepID2
- Increasing additional face detection boxes to represent more detail of the faces
- Using BB-FCN to select the face landmarks rather than SDM
- Using triplet loss to train the model for a better accuracy

GPU and Warm-Start Optimization for SVM Oct 2015 to Sept 2016

Selecting proper parameters is very important for obtaining an effective SVM
- The parameter selection process is very time-consuming
- The purpose of this project is to take use of the optimized SVM cross validation and the warm-start algorithm to accelerate the procedure of parameter selection

PUBLICATIONS

1. Wen, Zeyi, **Bin Li**, Kotagiri Ramamohanarao, Jian Chen, Yawen Chen, and Rui Zhang. "Improving Efficiency of SVM k-Fold Cross-Validation by Alpha Seeding." In *AAAI*, pp. 2768-2774. 2017.

2. Huang, Jin, **Bin Li**, Jia Zhu, and Jian Chen. "Age classification with deep learning face representation." *Multimedia Tools and Applications* (2017): 1-17.

3. Liao, Yongxin, Shenxi Yuan, Jian Chen, Qingyao Wu, and **Bin Li**. "Joint Classification with Heterogeneous Labels Using Random Walk with Dynamic Label Propagation." *In Pacific-Asia Conference on Knowledge Discovery and Data Mining*, pp. 3-13. Springer International Publishing, 2016.

PAPERS IN PREPARATION

1. Wen, Zeyi, **Bin Li**, Kotagiri Ramamohanarao, Jian Chen, Yawen Chen, and Rui Zhang. "GPU and Warm-Start Accelerated Parameter Selection for SVMs."

PROFESSIONAL EXPERIENCE

Tencent Holdings Limited   June 2017 to present
- Algorithm Development Researcher (Internship)
- Data analysis and processing, data warehouse design and implementation (Hive, OLAP)
- Detecting user activities with smartphone sensors

Hudongpai Technology Co., Ltd.   June 2015 to Aug 2015
- Fundamental ETL including data cleaning, dimension maintenance
- Providing support to eliminate data inconsistency between source applications and new data warehouse
- Providing operation and maintenance, monitoring, optimization for website group services, network and security systems

TECHNICAL SKILLS

Programming Languages: C++ (experienced), Python (experienced), MATLAB (experienced), Hive (experienced)

Familiar with: LaTeX, LibSVM, Caffe

Operating Systems: Linux (Ubuntu), Mac OS X, Microsoft Windows, Android, iOS