Xiaochen Lian

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Research Interest

Computer vision (object recognition, scene understanding, image retrieval)

Education

Shanghai Jiao Tong University

M.S. Candidate in Computer Science and Engineering (expected: March 2011)　　　September 2008 - Present
Advisor: Bao-Liang Lu[1]
GPA: 88.42/100 (overall); 90.19/100 (major)

B.E. in Computer Science and Engineering　　　September 2004 - July 2008
Thesis title: Gender Recognition Combining Internal and External Features (Best Thesis Award of Dept. of CSE)
ACM Honor Class (Rank: 5/19)
GPA: 3.77/4.3 (overall); 3.96/4.3 (major)

Research Experience

Research Student
July 2006 - Present

BCMI Lab[2] of Shanghai Jiao Tong University
Advisor: Prof. Bao-Liang Lu

Research Intern
July 2009 - April 2010

Web Search and Mining Group of Microsoft Research Asia
Mentor: Lei Zhang

Research Intern
July 2007.7 - October 2007

System Research Group of Microsoft Research Asia
Mentor: Zheng Zhang

Publications

[1] Mu Li, **Xiaochen Lian**, James Kwok and Bao-Liang Lu, Time and Space Efficient Spectral Clustering via Column Sampling, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2011

[2] **Xiaochen Lian**, Zhiwei Li, Lei Zhang and Bao-Liang Lu. *Max-Margin Dictionary Learning for Multiclass Image Categorization*. European Conference on Computer Vision (ECCV), 2010

[3] **Xiaochen Lian**, Zhiwei Li, Changhu Wang, Lei Zhang and Bao-Liang Lu. *Probabilistic Models for Supervised Dictionary Learning*. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2010

[4] **Xiaochen Lian** and Bao-Liang Lu. *Gender Recognition Combining Facial and Hair Information*. International Conference on Neural Information Processing (ICONIP), 2008

[5] Xuezheng Liu, Zhenyu Guo, Xi Wang, Feibo Chen, **Xiaochen Lian**, Jian Tang, Ming Wu, M. Frans Kaashoek, and Zheng Zhang. *D^3S: Debugging Deployed Distributed Systems*. 5th USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2008

Projects

Time and Space Efficient Spectral Clustering via Column Sampling: Participate in the work of a time- and space-efficient spectral clustering algorithm based on the Nyström method, which can scale to very large data sets. I was responsible for implementing the method and running experiments on image segmentation.

Supervised Dictionary Learning for Image Classification: Utilize class label information to increase the discriminative ability of the dictionary in Bag-of-Word framework. I proposed two models, which were accepted by CVPR 2010 and ECCV 2010 respectively.

Gender Classification: Build a gender classification system. It uses beard, hair and clothes information in addition to facial appearance and combines them by fuzzy integral, a classifier integration mechanism. I also hosted a data collection activity for a multi-view, whole body image dataset of 880 college students.

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[1] http://bcmi.sjtu.edu.cn/~blu/
[2] http://bcmi.sjtu.edu.cn/

Curriculum Vitae of Xiaochen Lian

Debugging Deployed Distributed Systems: Participate in the development of a checker that allows developers to specify predicates on distributed properties of a deployed system, and that checks these predicates while the system is running. When finding a problem it produces the sequence of state changes that led to the problem, allowing developers to quickly find the root cause. <u>I was responsible for the implementation together with Mr. Xuezheng Liu and Feibo Chen, and running the experiments on BitTorrent clients. I also found several bugs in BitTorrent using this tool</u>.

Application-Level Record and Replay: Participate in the development of a library-based record and replay tool, which aims to reproduce an application's execution by recording the results of selected functions in a log and during replay returning the results from the log rather than executing the functions. <u>I was responsible for debugging the tool</u>.

Multi-view Face Detection: Train a robust detector of multi-view faces under various circumstances using Adaboost with Haar-feature and Soft Cascade.

Honors and Awards

- Tung OOCL Scholarship (Rank: 2/150+)   2010
- ECCV 2010 Travel Grant   2010
- Second Class of National Scholarship of China   2009
- Second Class of National Scholarship of China (highest enrollment scholarship)   2008
- Morgan Stanley Scholarship   2008
- Microsoft Young Fellow   2007
- First Class of Excellent Scholarship Awards of Shanghai Jiao Tong University   2007
- Second Class of Excellent Scholarship Awards of Shanghai Jiao Tong University   2006
- Third Class of Excellent Scholarship Awards of Shanghai Jiao Tong University   2005
- First class of National Olympiad in Informatics, Fujian Province, China   2001-2004
- Third class of National Olympiad in Informatics, Fujian Province, China   2000

Professional Activities

- Reviewer of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)[3]   2011
- Invited presenter of The 5th Chinese Workshop on Machine Learning and Applications[4] 5-7 Nov. 2010
- TA of Machine Learning Courses[5] by Prof. Fei-Fei Li and Prof. Eric Xing   12-16 Aug. 2010
- INRIA Visual Recognition and Machine Learning Summer School[6], Grenoble, France   26-30 July 2010
- International Computer Vision Summer School[7], Sicily, Italy   6-11 July 2009
- TA of Database Management System Project for ACM Teaching Reform Class   Spring 2008
- TA of C++ Programming Language Course for ACM Teaching Reform Class   Fall 2009

SKILLS

Programming
Pascal, C++, Java, Matlab, OpenCV, CUDA C

English Proficiency
TOEFL iBT: Reading 29, Listening 27, Speaking 20, Writing 30, **Total** 106
GRE: Verbal 600 (86%), Quantitative 790 (91%), AW 3.5 (26%)

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[3] http://cvpr2011.org/
[4] http://lamda.nju.edu.cn/conf/mla10/
[5] http://bcmi.sjtu.edu.cn/ds/
[6] http://www.di.ens.fr/willow/events/cvml2010/
[7] http://svg.dmi.unict.it/icvss2009/

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