Yudong Xiao

Curriculum Vitae

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Education

2012–Present **MS in Computer Science & Technology, Supervisor: Qionghai Dai**, *Computer School, Tsinghua University*, expected 2015.

2008–2012 **BA in Computer Science & Technology**, *Computer School, Beijing University of Post & Telecommunications*.

Internship

2014.04–09 **Microsoft Research Asia, Software Analytic Group**, *Data Mining Intern*.
With Microsoft's distributed computing platform COSMOS, participated in development of Time series-based Abnormally Detection System on Improved Emerging Pattern Mining, and optimized to stable version.

2012.04–08 **Huawei the Noahs Ark Lab**, *Data Mining Intern*.
Hadoop platform, realizing the Apriori correlation algorithm for telecom device failure analysis on the huge historical fault log.

2011.09–12 **Beijing RenRen Inc**, *iOS DEV Intern*.
Participated in the development of two online versions of RenRen iOS clients location and album modules, ensuring that no major bugs.

Community

Blog **`imsheridan.com`**, *My blog (Chinese)*.

GitHub **`github.com/imsheridan`**.

Project Experience

2014–present **Emerging Pattern Mining**, *CSharp, COSMOS*, Startup Project.
Emerging Pattern Mining is a startup project, aimed at finding out the real reason of significant change in multi-dimensional time series-based data.
I have been working as a full-time intern in Sofware Analytic Group of Microsoft Research Asia, and responsible for designing and implementing a distributed abnormally detection system on Microsoft's distributed computing platform COSMOS, including frequent itemset mining by FP-Tree, change detection by GLR, entropy-based redundant pruning and result ranking.

2013–2014 **DeLogo**, *Matlab*, Research Project.
Working with Liheng Bian, Prof. Lei Zhang, Prof. Jinli Suo and Prof. Qionghai Dai.
DeLogo is a video logo removal system that can automatically and perfectly remove and repair the logo area. Mathematically, we treat inpainting as a global optimization with a linear system incorporating both the temporal video consistency and the priors of the inpainting regions. Further, we propose a numerical solution to above optimization based on Augmented Lagrangian Method.
I was the major contributor of this project and the paper has been accepted in ICIP '14.

2014 **Fast Ghost Imaging**, *C++, Matlab*, Research Project.
Working with Liheng Bian, Prof. Lei Zhang, Prof. Jinli Suo and Prof. Qionghai Dai.
Computational ghost imaging needs to acquire a large number of correlated measurements between reference patterns and the scene for reconstruction.
This project proposes a self-synchronization scheme that can eliminate this difficulty by introducing a high precision synchronization technique and corresponding algorithm. We physically implement the proposed scheme using a 20kHz spatial light modulator to generate random binary patterns together with a 100 times faster photodiode for high speed ghost imaging, and the acquisition frequency is around 14 times faster than that of state-of-the-arts.
I was the major contributor of this project and the paper has been submitted to Optics Letter (OL, IF 3.385).

Research

2014 **Yudong Xiao**, Jinli Suo, Liheng Bian, Lei Zhang, and Qionghai Dai, *"Automatic Inpainting of Linearly Related Video Frames"*, IEEE International Conference on Image Processing, 2014.

2014 Jinli Suo, **Yudong Xiao**, Liheng Bian, Lei Zhang, and Qionghai Dai, *"Self synchronizing scheme for high speed ghost imaging"*, submitted to Optics Letter (OL, IF 3.385).

2014 Tao Yue, Jinli Suo, **Yudong Xiao**, Lei Zhang, and Qionghai Dai, *"Image Quality Enhancement Using Original Lens via Optical Computing"*, submitted to Optics Express ((OE, IF 3.546).

2013 Yuqing Lu, Lei Zhang, **Yudong Xiao**, and Yangguang Li, *"Simultaneously detecting fake reviews and review spammers using factor graph model"*, ACM Web Science 2013.

Skills

Languages **C/C++ = Matlab = Objective-C > JAVA = Python**.

Major **Data Mining, Computer Vision**, *Solid basic knowledge in data mining, machine learning and computer vision related*.

English **CET-6 551**, *skilled at reading & translation of domain materials.*.