

# BO ZHAO

Ph.D. Candidate, Computer Science

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## EDUCATION

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<b>National University of Singapore, Singapore</b> Visiting Scholar	<i>Sep. 2015 – Present</i>
<b>Southwest Jiaotong University, China</b> Ph.D. Candidate in Computer Science, Overall GPA: 3.36/4	<i>Sep. 2012 – Present</i>
<b>Southwest Jiaotong University, China</b> M.S. in Computer Science*, Overall GPA: 3.51/4	<i>Sep. 2010 – Jun. 2012</i>
<b>Southwest Jiaotong University, China</b> B.S. in Computer Science, Overall GPA: 3.67/4	<i>Sep. 2006 – Jun. 2010</i>
<b>I-Shou University, Taiwan</b> Exchange Student in Computer Science, Overall GPA: 3.65/4	<i>Sep. 2009 – Jan. 2010</i>

## RESEARCH INTERESTS

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Deep Learning, Computer Vision, Image Segmentation  
Multimedia Information Retrieval, Data Mining

## KEY COMPETENCIES

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- Four years' research experience on Multimedia, Computer Vision, Deep Learning, Pattern Recognition.
- Specific research interests involve fine-grained image classification, image segmentation, information retrieval with deep learning techniques including CNN and RNN.
- Good knowledge about deep learning models such as Convolutional Neural Networks (CNN), Recurrent Neural Networks (RNN) and Long-Short Term Memory (LSTM). Good understanding of traditional machine learning techniques such as supervised learning models (e.g. SVM, KNN), unsupervised clustering methods, reinforcement learning and dimension reduction methods (e.g. PCA, LDA).
- Extensive experience in Deep Learning open-source platforms including Caffe, Theano, Torch.

## PUBLICATIONS

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1. **Bo Zhao**, Jiashi Feng, Xiao Wu, Shuicheng Yan "Memory-Augmented Attribute Manipulation Networks for Fashion Search," Submitted to IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017.
2. **Bo Zhao**, Jiashi Feng, Xiao Wu, Shuicheng Yan "A Survey on Deep Learning-Based Fine-Grained Object Classification and Semantic Segmentation," International Journal of Automation and Computing, 2017. (EI Journal)
3. **Bo Zhao**, Xiao Wu, Jiashi Feng, Qiang Peng, Shuicheng Yan "Diversified Visual Attention Networks for Fine-Grained Object Classification," IEEE Transaction on Multimedia (SCI)
4. **Bo Zhao**, Xiao Wu, Qiang Peng, Shuicheng Yan "Clothing Cosegmentation for Shopping Images," IEEE Transaction on Multimedia, 2016 (SCI)
5. **Bo Zhao**, Yan Zhu, "Formalizing and Validating the Web Quality Model for Web Source Quality Evaluation," Expert Systems with Applications, 41(7):3306-3312, 2014. (SCI)

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\*Transferred to combined Master/Ph.D program in Sep. 2012

6. Xiao Wu, **Bo Zhao**, Ling-Ling Liang, Qiang Peng, "Clothing Extraction by Coarse Region Localization and Fine Foreground/Background Estimation," International Conference on Multimedia Modeling (MMM), Huangshan, China, January 2013. (EI Conference)
7. Yan Zhu, **Bo Zhao**, "Formalization and Goodness-of-fit Analysis of Web Quality Model," Journal of Southwest Jiaotong University, 47(2):306-312, 2012. (EI Journal)
8. Zhao-Rui Liu, Xiao Wu, **Bo Zhao**, "Clothing Extraction Using Region-based Segmentation and Pixel-level Refinement," IEEE International Symposium on Multimedia (ISM), Tai-chung, Taiwan, December 2014. (EI Conference)

## PATENTS

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1. Xiao Wu, **Bo Zhao**, Qiang Peng, "A Cosegmentation Method for Clothing Shopping Images."
2. Xiao Wu, **Bo Zhao**, Ling-ling Liang, Qiang Peng, "Method for Detecting and Extracting Main Target in Cluttered Image."
3. Xiao Wu, **Bo Zhao**, Ling-ling Liang, Qiang Peng, "Target Clothing Extraction Method Aiming at Shopping Image Retrieval."

## RESEARCH PROJECTS

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<b>Sichuan Provincial Science and Technology Innovation Seeding Fund</b> <i>Clothing Visual Search Based on Image Understanding</i>	<b>PI</b> <i>Oct. 2014 – Dec. 2015</i>
<b>Sichuan Provincial Science and Technology Innovation Seeding Fund</b> <i>Cosegmentation for Clothing Images</i>	<b>PI</b> <i>Oct. 2012 – Dec. 2013</i>
<b>National Natural Science Foundation of China</b> <i>Cluttered Clothing Image Retrieval and Recommendation</i>	Participant <i>Jan. 2014 – Dec. 2017</i>
<b>Sichuan Provincial Science Fund for Distinguished Young Scholars</b> <i>Target Extraction of Cluttered Shopping Images</i>	Participant <i>Jan. 2013 – Dec. 2015</i>
<b>Sichuan Provincial Science Fund for Distinguished Young Scholars</b> <i>Content-Based Shopping Image Retrieval</i>	Participant <i>Jan. 2012 – Dec. 2013</i>
<b>National Key Laboratory Project</b> <i>Massive High-speed Train Data Management System</i>	Participant <i>Oct. 2010 – Jan. 2012</i>
<b>National College Student Innovation and Practice Project</b> <i>Applications of NS2 in the Teaching of Network Engineering</i>	<b>Co-PI</b> <i>Sep. 2008 – Jun. 2009</i>

## HONORS AND AWARDS

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<b>Scholarship from China Scholarship Council</b>	<i>May 2015</i>
<b>National Scholarship for Graduate Students</b>	<i>Oct. 2014</i>
<b>SWJTU Excellent Undergraduate</b>	<i>Jun. 2010</i>
<b>National Scholarship</b>	<i>Nov. 2008</i>
<b>National Scholarship</b>	<i>Nov. 2007</i>

## REFEREES

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**Jiashi Feng**  
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