

# Xiaopeng Yang

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## Summary

Currently a postdoctoral fellow at the University of Waterloo. Research experience in machine learning and related fields for 7+ years. Authored or co-authored 10+ papers in journals and conferences. Hold 2 projects transferred successfully from academy to industry. Extensive public speaking experience with superior ability to develop compelling and coherent presentations. Able to work in a high-stress and fast-paced environment.

## Skills

[Programming Languages] Python(proficient) Java, C#(familiar) JavaScript, SQL(general)  
[Frameworks and tools] Tensorflow, React, MongoDB, MySQL, Git, Jekyll, Markdown, LaTeX

## Experience

[Postdoctoral Fellow] – [University of Waterloo, Waterloo, Canada] [2016.10] – [current]

- Designed a novel deep neural model based on variational autoencoders for poetry generation
- Developed a Chinese poetry generation system based on Deep Learning (**Python+Tensorflow**) (transferred to **Boyan Dodo Chabot**)
- Built two human evaluation websites for poetry quality assessment (**JavaScript+MongoDB/MySQL**)

[Research Intern] – [National Institute of Informatics, Tokyo, Japan] [2014.09] – [2015.02]

- Designed a novel image search re-ranking algorithm based on metric learning and multi-modality fusion (published in **IEEE Transactions on Image Processing 2016**)

[Research Intern] – [Microsoft Research, Beijing, China] [2014.02] – [2014.07]

- Designed a graph-based video duplicate detection algorithm
- Developed a video duplicate detection system (**C#**) (transferred to **Bing Video Search**)

[Software Engineer Intern] – [Chinese Academy of Sciences, Beijing, China] [2012.09] – [2013.02]

- Developed a Weibo data analysis system (**Java**) and its demonstration website (**JavaScript**)

## Education

[University of Chinese Academy of Sciences] – [Ph.D., Beijing, China] [2012.09] – [2016.07]

Major: Computer Application Technology GPA: 3.44

[Shandong Normal University] – [M.S., Jinan, China] [2010.09] – [2012.07]

Major: Computer Software and Theory

[Shandong Normal University] – [B.S., Jinan, China] [2006.09] – [2010.07]

Major: Computer Science and Technology

## Publications

- **Xiaopeng Yang**, Xiaowen Lin, Shunda Suo, and Ming Li. Generating Thematic Chinese Poetry using Conditional Variational Autoencoders with Hybrid Decoders. arXiv preprint arXiv:1711.07632, 2017. **[Accepted by IJCAI-ECAI-2018, 20.5% acceptance rate]**
- **Xiaopeng Yang**, Tao Mei, Yongdong Zhang, Jie Liu, and Shin'ichi Satoh. Web Image Search Re-ranking with Click-based Similarity and Typicality. *IEEE Transactions on Image Processing*, 25(10): 4617-4630, 2016.
- **Xiaopeng Yang**, Yongdong Zhang, Ting Yao, Chong-Wah Ngo, and Tao Mei. Click-boosting Multi-modality Graph-based Reranking for Image Search. *Multimedia Systems*, 21(2): 217-227, 2015.
- Yongdong Zhang, **Xiaopeng Yang**, and Tao Mei. Image Search Reranking with Query-dependent Click-based Relevance Feedback. *IEEE Transactions on Image Processing*, 23(10): 4448-4459, 2014.
- **Xiaopeng Yang**, Tao Mei, and Yongdong Zhang. Rescue Tail Queries: Learning to Image Search Re-rank via Click-wise Multimodal Fusion. In *Proceedings of the 22nd ACM International Conference on Multimedia*, 2014, pp. 537-546. **[Full paper, 19.2% acceptance rate]**
- **Xiaopeng Yang**, Yongdong Zhang, Ting Yao, Zheng-Jun Zha, and Chong-Wah Ngo. Click-boosting Random Walk for Image Search Reranking. In *Proceedings of the 5th International Conference on Internet Multimedia Computing and Service*, 2013, pp. 1-6. **[Best paper award]**
- Hanchao Yu, Hong Liu, and **Xiaopeng Yang**. Evolutionary Modeling Approach for Crowd Animation. In *Proceedings of the International Conference on Computer Science and Information Processing (CSIP)*, 2012, pp. 237-241.
- **Xiaopeng Yang**, Hong Liu, Yanhui Ding, and Hanchao Yu. An Improved Cellular Genetic Algorithm with Evolutionary Rules for 3D Animation Modeling Design. In *Proceedings of the 12th International Conference on CAD/Graphics*, 2011, pp. 341-348.
- **Xiaopeng Yang**, Hong Liu, and Hanchao Yu. Cellular Genetic Algorithm for Supporting Creative Design of 3D Animation Modelings. In *Proceedings of the Third Pacific-Asia Conference on Circuits, Communications and System (PACCS)*, 2011, pp. 1-4.
- Hanchao Yu, Hong Liu, and **Xiaopeng Yang**. Evolutionary Computing Method in 3D Animation Modeling Cooperative Design. In *Proceedings of the 15th International Conference on Computer Supported Cooperative Work in Design (CSCWD)*, 2011, pp. 296-303.

## Awards & Honors

Outstanding Graduate of Beijing, China (2016); **Google Anita Borg Memorial Scholarship** (2015); Stars of Tomorrow of **Microsoft Research Asia**, 2 years (2013, 2014); **Chinese Government Scholarship** for Ph.D. Candidates (2014); UCAS Excellent Student Pacesetter (2014); UCAS Excellent Student Leader, 2 years (2013, 2014); Excellent Bachelor Thesis of Shandong Province, China (2010); Excellent Student of Shandong Province, China (2009)