Linjun Yang

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Dr. Linjun Yang has over 10 years experiences on researching/developing cutting-edge image retrieval/computer vision/machine learning technologies. He has authored/co-authored more than 60 peer-reviewed papers published in various conference proceedings and journals and 23 filed US/international patents. His papers have gotten over 2000 citations and his h-index is 22 according to Google Scholar 4/2015. He is now leading a team to develop various advanced image understanding technologies/systems on billions of Web image data, including deep learning, semantic embedding, duplicate-detection, visual similarity search, annotation, etc., with application to various Microsoft products.

EDUCATION

Ph.D, Multimedia Information Retrieval
Delft University of Technology, The Netherlands 2013

M.S., Compute Science
Fudan University, Shanghai, China 2006

B.S., Electronics & Information System
East China Normal University, Shanghai, China 2001

AWARDS

The Best Paper Award at ACM International Conference on Multimedia (ACM MM), Beijing, China, 2009.

The Best Student Paper Award at the 18th ACM Conference on Information and Knowledge Management (CIKM), Hong Kong, 2009.

PROFESSIONAL EXPERIENCE

Microsoft Bing Jul. 2012 - Present
Principal Software Engineer Manager
- lead a team of 10+ people to research and develop cutting-edge computer vision and machine learning technologies, as well as develop products such as Bing visual search.

- Visual search (a.k.a search by image)
  own the product e2e including building measurement set/metric; developing models/rankers for search quality, algorithms/pipeline for fast search, and new UX features (like object detection)for user experience; tracking/improving user engagement metric
- Deep learning for image understanding
  research/develop deep neural network models for improving various image understanding tasks including feature learning, image categorization, object detection, semantic embedding, etc.
- Large-scale duplicate/similarity search system
  build a system to retrieve similar/duplicate images from billion-scale database for billions of images per day
- Image tagging / recognition
  build algorithms/system to generate tags for any given image based on deep learning and similarity search
- image processing pipeline
  designed and implemented a graph based image processing pipeline to faciliate algorithm/model development and deployment

Microsoft Bing Nov. 2011 - Apr. 2012
Visiting Researcher, Multimedia Search Team

- Designing and implementing back-end image processing library/pipeline.
- Developing billion-scale image duplicate detection system.

Microsoft Research Asia Jul. 2006 - Jul. 2012
Associate Researcher, Media Computing Group

- Visual search
  We study various methods to improve the precision of image and video search by example.
- Content-based Image Ranking/Reranking
  This objective of this project is to improve image search ranking by utilizing visual content analysis.
- Video analysis SDK
  to develop a suite of libraries for image and video content analysis based on Windows DirectShow API.

COMPUTING SKILLS

- Experienced in C++, C#.
- Experienced in Machine learning and Information retrieval.

REPRESENTATIVE PUBLICATIONS

(full publicationb list: https://scholar.google.com/citations?user=cvgKxDQAAAAJ)

[10] Linjun Yang, Alan Hanjalic, "Learning to Rerank Web Images," IEEE Multimedia 2013.

[9] Bo Geng*, Linjun Yang, Chao Xu, Xian-Sheng Hua, Shipeng Li, "The Role of Attractiveness in Web Image Search," *ACM Multimedia 2011.*

[8] Xinmei Tian*, Linjun Yang, Jingdong Wang, Xiuqing Wu, Xian-Sheng Hua, "Bayesian Visual Reranking," IEEE Transactions on Multimedia.

[7] Lifeng Shang, Linjun Yang, Fei Wang, Kwok-Ping Chan, Xian-Sheng Hua, "Real-time large scale near-duplicate web video retrieval," *ACM Multimedia 2010.*

[6] Linjun Yang, Alan Hanjalic, "Supervised Reranking for Web Image Search," *ACM Multimedia 2010.*

[5] Bo Geng*, Linjun Yang, Chao Xu, Xian-Sheng Hua, "Ranking Model Adaptation for Domain Specific Search," *ACM Conference on Information and Knowledge Management (CIKM) 2009 (Best Student Paper Award).*

[4] Zheng-Jun Zha*, Linjun Yang, Tao Mei, Meng Wang, Zengfu Wang, "Visual Query Suggestion," *ACM Multimedia 2009 (Best Paper Award).*

[3] Lei Wu*, Linjun Yang, Nenghai Yu, Xian-Sheng Hua, "Learning to Tag", *WWW '09: Proceeding of the 18th international conference on World Wide Web. 2009.*

[2] Dong Liu*, Xian-Sheng Hua, Linjun Yang, Meng Wang, Hong-Jiang Zhang, "Tag Ranking", *WWW '09: Proceeding of the 18th international conference on World Wide Web. 2009.*

[1] Xinmei Tian*, Linjun Yang, Jingdong Wang, Yichen Yang*, Xiuqing Wu, Xian-Sheng Hua, "Bayesian Video Search Reranking," *ACM Multimedia 2008.*

** the interns I mentored at Microsoft Research Asia*