

Chong Huang

Basic Information

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Date of birth: May 10, 1989

Nationality: The People's Republic of China (P.R.C.)

Education

Sep.2011-Present

Master of Signal and Information Processing, Pattern Recognition & Intelligent System Lab, BUPT

- Research interests are, Information Retrieval, Machine Learning, Image Classification, Visual Reranking, Deep Learning

Sep.2007-Jun.2011

Bachelor of Information Engineering, School of Information and Communication Engineering, BUPT

- Major courses are, C++ Programming, Data Structure, Pattern Recognition, Digital Signal Processing, Signals and Systems, Principles of Communications

Project Experience

Apr.2011-Present

Human-Computer Interactive Department, France Telecom Orange Labs (Beijing)

Intern

May.2011-Sep.2011

Content-based Copy Detection Task in the TRECVID 2011

Team Member

- The copy detection is to find the corresponding copy sequences of one query from the video database, and the query may have different audio and video transformations.
- Responsible for audio feature extraction: Weighted Audio Spectrum Flatness (WASF) which is used for weighting audio data by simulating human auditory system.
- Participate in result-based fusion from different features.
- Achievement: Rank 6 in the Content-based Copy Detection in TRECVID 2011.

Jan.2012-May.2012

Video to Commercial (V2C)

Team Member

- Video to Commercial (V2C) is the pre-roll ad targeted interactive service between TV screen and mobile phone. The key technology involves the content-based copy detection and TV check-in.
- Responsible for the improvement and encapsulation of image recognition module.
- Within this project, I improve the feature extraction and present a novel feature named RGB-DSIFT, which could be used in real-time visual retrieval. More details could be presented in "A Fast Color Feature for Real-Time Image Retrieval", *IC-NIDC* 2012.

May.2012-Sep.2012

Instance Search Task (pilot) in the TRECVID 2012

Team Member

- The instance search is to locate for each query up to the 1000 clips most likely to contain a recognizable instance of the entity from a collection of test clips (files).
- Submit an automatic run F_X_NO_FTRDBJ_3:
 - Feature extraction: Each image is presented by using BOW, which is produced by using Approximate K-Means (AKM) to cluster SIFT feature.
 - Video indexing and searching: inverted index, counting min-tree
 - Visual Reranking: confuser extraction, geometry verification
- Achievement: Rank 13 (automatic) and Rank 2 (interactive) in the Instance Search (pilot) in the TRECVID 2012.

May.2013-Sep.2013

Instance Search Task in the TRECVID 2013

Team Member

- The task is the same as that in TRECVID 2012.
- Submit an automatic run F_X_NO_FTRDBJ_3:
 - Feature extraction: learning the visual feature based on the architecture of convolutional neural network.
- Achievement: Rank 5 (automatic) Rank 1 (interactive) in the Instance Search in the TRECVID 2013.

Apr.2013-Aug.2013

MSR-Bing Image Retrieval Challenge (the industrial track)

Team Member

- The topic is to develop systems to assess the effectiveness of query terms in describing the images crawled from the web for image search purposes.
- Responsible for the feature extraction and design and implement the relevance measurement.
- Achievement: Rank 2 in the MSR-Bing Image Retrieval Challenge (the industrial track).

Oct.2013-Present

ImageNet Large Scale Visual Recognition Challenge 2013

Team Member

- This challenge evaluates algorithms for object detection and image classification at large scale.

Publication

- “France Telecom Orange Labs (Beijing) at TRECVID 2011: Content-Based Copy Detection”
H.L. Bai, Y. Dong, W. Liu, L.Z. Wang, **C. Huang**, K. Tao, *TRECVID* 2011 Notebook Paper
- “Contented-Based Large Scale Web Audio Copy Detection”
L.Z. Wang, Y. Dong, H.L. Bai, J.W. Zhang, **C. Huang**, W. Liu, *ICME* 2012
- “Audio-Based Copy Detection in the Large-Scale Internet”
H.L. Bai, L.Z. Wang, **C. Huang**, W. Liu, C.B. Zeng, Y. Dong, *PCM* 2012
- “A Fast Color Feature for Real-Time Image Retrieval”
C. Huang, Y. Dong, S.S. Cen, H.L. Bai, W. Liu, J.W. Zhang, J. Zhao, *IC-NIDC* 2012
- “France Telecom Orange Labs (Beijing) at TRECVID 2012: Instance Search”
H.L. Bai, Y. Dong, L.Z. Wang, **C. Huang**, N. Zhao, S.S. Cen, K. Tao, *TRECVID* 2012 Notebook Paper
- “An Efficient Graph-based Visual Reranking”
C. Huang, Y. Dong, H. L. Bai, L. Z. Wang, N. Zhao, S. S. Cen, J. Zhao, *ICASSP* 2013
- “A Semantic Graph-based Algorithm for Image Search Reranking”
N. Zhao, Y. Dong, H. L. Bai, L.Z. Wang, **C. Huang**, S.S. Cen, J. Zhao, *ICASSP* 2013

Awards and Honors

- “Enterprise Scholarship”, 2012/2013
- “Outstanding Student Award”, Second-class scholarship, 2011/2012

Skills

- Skilled in developing C++ programs under Linux
- Background on pattern recognition and machine learning
- Familiar with Python, Shell, Perl, Matlab
- Experienced in fund application (NSFC)
- Familiar with paper writing and LaTeX
- CET-6 584, GRE 540 (Verbal) + 800 (Quantitative) basic ability of English reading and writing

Self-Evaluation

- Eager to learn new things and willing to take challenges
- Ability of analyzing and solving problems
- High sense of responsibility and strong interpersonal skills