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, Feature Extraction, 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-Aug.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).

Publication

- ➢ **France Telecom Orange Labs (Beijing) at TRECVID 2011: Content-Based Copy Detection**
  Hongliang Bai, Yuan Dong, Wei Liu, Lezi Wang, **Chong Huang**, Kun Tao
  TRECVID 2011 Notebook Paper: http://www-nlpir.nist.gov/projects/tvpubs/tv11.papers/ftrdbj.pdf
- ➢ **Contented-Based Large Scale Web Audio Copy Detection**
  Lezi Wang, Yuan Dong, Hongliang Bai, Jiwei Zhang, **Chong Huang**, Wei Liu
  ICME 2012: http://www.computer.org/csdl/proceedings/icme/2012/4711/00/4711a961-abs.html
- ➢ **Audio-Based Copy Detection in the Large-Scale Internet**
  Hongliang Bai, Lezi Wang, **Chong Huang**, Wei Liu, Chengbin Zeng, Yuan Dong
  PCM 2012: http://link.springer.com/chapter/10.1007%2F978-3-642-34778-8_56
- ➢ **A Fast Color Feature for Real-Time Image Retrieval**
  Chong Huang, Yuan Dong, Shusheng Cen, Hongliang Bai, Wei Liu, Jiwei Zhang, Jian Zhao
  IC-NIDC 2012: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6418794&tag=1
- ➢ **France Telecom Orange Labs (Beijing) at TRECVID 2012: Instance Search**
  Hongliang Bai, Yuan Dong, Lezi Wang, **Chong Huang**, Nan Zhao, Shusheng Cen, Kun Tao
  TRECVID 2012 Notebook Paper: http://www-nlpir.nist.gov/projects/tvpubs/tv12.papers/ftrdbj.pdf
- ➢ **An Efficient Graph-based Visual Reranking**
  Chong Huang, Yuan Dong, Hongliang Bai, Lezi Wang, Nan Zhao, Shusheng Cen, Jian Zhao
  ICASSP 2013: http://www.icassp2013.com/Papers/ViewPapers_MS.asp?PaperNum=4016
- ➢ **A Semantic Graph-based Algorithm for Image Search Reranking**
  Nan Zhao, Yuan Dong, Hongliang Bai, Lezi Wang, **Chong Huang**, Shusheng Cen, Jian Zhao
  ICASSP 2013: http://www.icassp2013.com/Papers/ViewPapers.asp?PaperNum=3948

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
- ➢ Pass CET-6, 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