

# Mr. Hui, Kai

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## Brief Information

I am a last year Ph.D. student from Databases and Information Systems group in Max-Planck-Institut für Informatik. I work on **text mining** and information retrieval, using machine learning and deep learning methods during my PhD. I am interested in Data Scientist positions, using Machine Learning/Deep Learning.

## EDUCATION

Jul.2013—Sep.2017 (expected) **Ph.D. student in Computer Science** (Supervisor: Dr. Klaus Berberich)  
*D5 Databases and Information Systems, Max-Planck Institute for Informatics*

Jul.2013 **Master's degree in Engineering** (Supervisor: Prof. Tiejian Luo and Dr. Ben He)  
*School of Computer and Control Engineering, University of Chinese Academy of Sciences*

Jun.2010 **Bachelor's degree** (Tutor: Dr. Jie Xu)  
*Science Experimental Class, School of Science, Beijing Jiaotong University*

## SELECTED EXPERIENCES

- ✧ **Intern Position, Microsoft Research Asia**, mentor Dr. Bin Gao, Jan.2012 – Jul.2012  
Work on computational advertising, selecting keywords to match the user queries by maximizing the revenue.
- ✧ Intern Position in Resources and Environment Policy Institute (REPI) of Development Research Center (DRC) (Data Analysis Internship), Mar.2010 – Jul.2013  
Predict the long/short-term consumption of finished oil with prediction models (Excel).
- ✧ **Teaching Assistant** for Information Retrieval and Data Mining (graduate level core course), Universität des Saarlandes, October.13 – February.14  
Teach in one of the tutor group and evaluate the assignments etc..

## SELECTED AWARDS

- ✧ 2008 Contemporary Undergraduate Mathematical Contest in Modeling (CUMCM 2008, China) :1st prize (team with other 2 colleagues)
- ✧ 2013 Outstanding Graduate of University of Chinese Academy of Sciences (top 15%)

## SELECTED PUBLICATIONS

- ✧ Kai Hui, Andrew Yates, Klaus Berberich, Gerard de Melo: RE-PACRR: A Context and Density-Aware Neural Information Retrieval Model. arxiv 2017 [\[url\]](#)
- ✧ Kai Hui, Andrew Yates, Klaus Berberich, Gerard de Melo: A Position-Aware Deep Model for Relevance Matching in Information Retrieval. EMNLP 2017 [\[url\]](#)
- ✧ Kai Hui, Klaus Berberich: Cluster Hypothesis in Low-Cost IR Evaluation with Different Document Representations. WWW 2016 [\[pdf\]](#) [\[poster\]](#)
- ✧ Kai Hui, Bin Gao, Ben He, Tiejian Luo: Sponsored Search Ad Selection by Keyword Structure Analysis. ECIR 2013 [\[pdf\]](#) [\[slide\]](#)
- ✧ Kai Hui, Ben He, Tiejian Luo, Bin Wang: Relevance weighting using within-document term statistics. CIKM 2011 [\[pdf\]](#) [\[slide\]](#)

## ENGINEERING SKILLS

- ✧ **Python**: experienced, especially with toolkits like sk-learn and Keras. Self-implemented backpropagation with numpy and cython. [\[linearSVM\]](#)
- ✧ **Java**: experienced. Independently implemented an in-memory real-time recommendation systems based on twitter RESTful API and Apache Lucene [\[tweetcrawler\]](#) [\[microblogRec\]](#)
- ✧ **Machine Learning and Deep Learning**: good understanding of standard off-the-shelf ML methods. Good understanding of CNN/RNN/Feedforward deep network structure.
- ✧ **Bigdata Architectures**: knowledge and experiences in Spark/Map-reduce
- ✧ **Others**: design/implement Crowdsourcing [\[servercode\]](#) jobs to collect manual judgments, scala, matlab, shell, sql etc..

## HOBBIES

- ✧ Travel to discover different cities and drive to explore unknown places are my ways to relax and to refresh from intensive work.