

Fei Tian

CONTACT

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EDUCATION

PhD Student, School of Computer Science and Technology *Sep. 2011 – Present*
University of Science and Technology of China (Jointly with Microsoft Research Asia)

Bachelor, School of Computer Science and Technology *Aug. 2007 – June. 2011*
University of Science and Technology of China

EXPERIENCE

Research Intern *Oct. 2012 – Present*
Artificial Intelligence Group, Microsoft Research Asia, Mentor: Tie-Yan Liu

Engineering Intern *Oct. 2010 – Aug. 2011*
Information Retrieval and Mining Group, Microsoft Research Asia, Mentor: Hang Li

RESEARCH INTERESTS

- Deep Neural Network, Recurrent Neural Network, Word Embedding, especially their application for Natural Language Processing and Text Mining
- Graphical Model, Nonparametric Bayesian Methods
- Data Mining, Mining on Knowledge Graph, Computational Advertising

PROJECTS

Chat Mate for Children *June. 2015 – Present*

- Design and implement an AI engine to chat with children;
- Participate in implementing the backend service, including building the QA index, the logical chat framework, and using LSTM-RNN to improve chat quality;
- Implement the Text To Speech and Speech Synthesis service in web frontend.
- The project is shipping into the products of MoreChinese(the leading children educational App in Apple App Store China) and Lenovo.

Microsoft Distributed Machine Learning Toolkit (Microsoft DMTK) *July. 2015 – Sep. 2015*

- Member of the Microsoft DMTK develop team.
- Ship the large scale word embedding tool into DMTK, including distributed word2vec and distributed multi-sense word embedding, both scale to big embedding models with billions of parameters.

Profession Detection based on Face *July. 2015*

- Design and implement a web service to detect one's profession based on his uploaded photos;
- Train a CNN image classifier based on Caffe;
- The project is shipping into Microsoft Research Asia official WeChat account as one of its important features.

Deep Neural Network for Text and Graph

Nov. 2013 – Present

- Design and implement novel neural network based algorithms, including word embedding and recurrent neural network for various text mining tasks;
- Design and implement a scalable graph clustering algorithm based on sparse auto-encoder;
- Various research papers are accepted by top peer reviewed international conference;
- The technology has been transferred into Microsoft XiaoIce and Bing ads platform.

Html Classifier for Office SharePoint

Dec. 2010 – June. 2011

- Develop an html classifier for relevance search among enterprise Intranet based on Machine Learning methods;
- The classifier is shipped into Microsoft Office SharePoint.

KOFLive - A Real Character Computer Fighting Game

Nov. 2010 – Mar. 2011

- Develop a fighting game simulating real human characters using C# and Microsoft XNA framework;
- The game attracts thousands of downloads and receives fairly positive feedback.

PUBLICATIONS

1. **Fei Tian**, Bin Gao, Tie-Yan Liu, Learning Better Word Embedding by Asymmetric Low-Rank Projection of Knowledge Graph (*in submission*)
2. Yitan Li, Linli Xu, **Fei Tian**, Liang Jiang, Xiaowei Zhong and Enhong Chen, Word Embedding Revisited: A New Representation Learning and Explicit Matrix Factorization Perspective, *Twenty-Fourth International Joint Conference on Artificial Intelligence (IJCAI-15)*
3. Hafang Li, **Fei Tian**, Wei Chen, Tao Qin, Zhi-Ming Ma, and Tie-Yan Liu, Generalization Analysis for Game-Theoretic Machine Learning, *Twenty-Ninth AAAI Conference on Artificial Intelligence (AAAI-15)*
4. **Fei Tian**, Hanjun Dai, Jiang Bian, Bin Gao, Rui Zhang, Enhong Chen and Tie-Yan Liu, A Probabilistic Model for Learning Multi-Prototype Word Embeddings, *Twenty-Fifth International Conference on Computational Linguistics (COLING-14)*
5. **Fei Tian**, Bin Gao, Enhong Chen and Tie-Yan Liu, Learning Deep Representations for Graph Clustering, *Twenty-Eighth AAAI Conference on Artificial Intelligence (AAAI-14)*
6. **Fei Tian**, Haifang Li, Wei Chen, Tao Qin, Enhong Chen and Tie-Yan Liu, Agent Behavior Prediction and Its Generalization Analysis, *Twenty-Eighth AAAI Conference on Artificial Intelligence (AAAI-14)*

HONORS AND AWARDS

Chinese Academy of Sciences President Award	June. 2015
IBM Scholarship	Oct. 2014
National Scholarship	Sep. 2014
Microsoft Research Asia PhD Fellowship Nomination Award	Sep. 2014
Microsoft Research Asia, Stars of Tomorrow Internship Award	Aug. 2011
Google Excellence Scholarship	June. 2010
Excellent Student Award of USTC	Sep. 2010, Sep. 2009, Sep. 2008

SKILLS

Programming Language: C/C++, Python, Matlab, C#, Perl, L^AT_EX
Operating Systems: Linux, Windows, Mac OS