Wenbo Hu 胡文波

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2013.08-2018.07 (expt.) Ph.D. in Computer Science and Tech of Tsinghua Univ.

2009.08-2013.07 B.S. in Applied Maths of Xidian Univ. (*with honor*)

My research interests include machine learning, large-scale Bayesian inference and their applications in natural language processing. I am dedicated to find a challenging job that relates to machine learning.

Research Projects and Papers:

***Wenbo Hu*, Lifeng Hua, Lei Li, et al., "Semantic Attribute Modulated Language Modeling", arXiv:1707.00117, 2017.**

We build an improved RNN-based language model with well-designed semantic attributes. This further motivates us to generate texts with different attribute combinations, with an interesting lyric generation experiment result.

***Wenbo Hu*, Jun Zhu, et, al., "Semi-supervised max-margin topic model with manifold posterior regularization," IJCAI'2017.**

We introduce the manifold posterior regularization to the max-margin topic model and present a semi-supervised topic model. With much less document labels, we still learn nice document representation and predict document labels.

Jun Zhu, Jianfei Chen, *Wenbo Hu* and Bo Zhang, "Big Learning with Bayesian Methods," To appear in National Science Review (NSR), 2017. (SCI index >8)

We extensively review the recent advances of large-scale Bayesian learning.

***Wenbo Hu*, Jun Zhu, and Bo Zhang, "Fast sampling for Bayesian max-margin models," Expert Systems with Applications (ESWA), vol. 69, pp. 277–287, Mar 2017. (SCI index >2.5)**

We build a stochastic subgradient MCMC method for the fast inference of max-margin-regularized posteriors. Experimental results on several Bayesian max-margin models shows that our method is accurate and fast.

Jun Zhu, *Wenbo Hu*, "Recent Advances in Bayesian Machine Learning", Journal of Computer Research and Development, 2015. (In Chinese)

We review the recent advances of Bayesian machine learning.

Working Experiences:

2016.07–2017.04 Toutiao AI LAB Research Intern

Build a RNN-based RNN short-sequence classifier, which is later used in a video-classification system.

Research work on text representation and generation. I and my collaborators mainly work on semantic attribute modulated language modeling and language generation, in which we present some interesting lyric generations

2015.07–2015.08 Information Center of Human Resources and Social Security Bureau, Ningde, Fujian.

Doctors' Social Practice Course of Tsinghua Univ.

Building the new government portal website and maintenance training.

Society Work:

2014.01-2014.12 Graduate student union of CS dept., Tsinghua Univ. Vice-president

2012.12-2013.7 Go Club of Xidian Univ. Founder

Awards:

Schlumberger scholarship, 2017

Best Poster Award at AEARU-CSWT Workshop, 2015

Ten Distinguished Undergraduate Students of Xidian University, 2013

Finalist of Interdisciplinary Contest in Modeling (Top 1%), 2012

Talents/Hobbies:

Go game, jogging.

Personal Statement:

My research interests include machine learning, fast Bayesian inference and their applications in natural language processing. Overall, my Ph.D. thesis focuses on the text representation and generation, as well as the fast inference for these models.

In the second year of my Ph.D. career, I present a subgradient-based stochastic Hamiltonian Monte Carlo method and use it for the fast inference of Bayesian max-margin models. In the third year of my Ph.D. career, to reduce the document labeling cost, I propose a semi-supervised topic model with manifold posterior regularization. In the fourth year, with the existing nice text representations, I work on semantic attribute modulated text generation. With the given different semantic attributes, our model generates texts with different styles or themes.

I worked in Toutiao AI lab as a research intern and I mainly worked in text categorization and language generation.

I hope to take good advantage of my Ph.D. career experiences to help the manufacturers solve the real-word challenges.