

**Peng Xu**  
(780)6558396  
<http://github.com/billy-inn>

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[pxu4@ualberta.ca](mailto:pxu4@ualberta.ca)  
<http://billy-inn.github.io/about>

## Education

- **University of Alberta** Edmonton, AB  
*M.Sc. Computer Science* 2016.1 - 2018.7
  - GPA: 4.0/4.0
  - Supervisor: Prof. Denilson Barbosa
- **Beijing University of Posts and Telecommunications** Beijing  
*B.Eng. Electronic Information Engineering* 2011.9 - 2015.6
  - Major: 89.62/100, Overall: 87.06/100
  - Thesis Advisor: Prof. Jie Tang

## Research and Work Experience

- **Borealis AI** Toronto  
*Researcher* 2018.7-Present
  - Aiming at publishing in top conferences in Machine Learning (ICLR/ICML/NeurIPS) and Natural Language Processing (ACL/NAACL/EMNLP)
  - One long paper accepted at ACL 2019, two papers under review at NeurIPS 2019
  - Implement and improve SOTA semantic parsing models to build a Text-to-SQL system which is the backbone of a business product releasing next year
- **Shannon AI** Beijing  
*NLP Algorithm Intern* 2018.5
  - Developing intelligent financial question answering (QA) system
  - Building the whole pipeline to automatically extract information from company announcements
- **DBpedia**  
*Active Contributor and Mentor for Google Summer of Code (GSoC)* 2016.4-Present
  - Inferred infobox template class mappings from Wikipedia and WikiData in **python** in 2016
  - Mentored two GSoC projects about entity embeddings based on DBpedia in 2017
  - Mentored one GSoC project about DBpedia embeddings for OOV resources in 2018
- **University of Alberta** Edmonton, AB  
*Research Assistant under Prof. Denilson Barbosa* 2016.5-2018.7
  - Research on fine-grained entity type classification (FETC) with deep neural models
  - Research on relation extraction (RE) with deep neural models
  - Research on incorporating knowledge base (KB) information to facilitate neural information extraction, mainly on task of FETC and RE
  - Research on applying reinforcement learning (RL) on natural language processing (NLP)
- **Tsinghua University** Beijing  
*Research Assistant under Prof. Jie Tang* 2014.9-2015.6

- Developing **Arnetminer II** which is a website that offers comprehensive search and mining services for academic community in `python` and `scala`

- **Tsinghua University**

- *Research Assistant under Prof. Zhihu Du*

Beijing

2014 Summer

- Research on efficient partial-mesh spreading in `C` and `CUDA`

## Publications

1. *Unsupervised Controllable Text Generation with Global Variation Discovery and Disentanglement*  
arXiv preprint, 2019, *under review*  
**Peng Xu**, Yanshuai Cao, Jackie Chi Kit Cheung
2. *Better Long-Range Dependency By Bootstrapping A Mutual Information Regularizer*  
arXiv preprint, 2019, *under review*  
Yanshuai Cao\* and **Peng Xu**\* (\* indicates equal contribution)
3. *A Cross-Domain Transferable Neural Coherence Model*  
In Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL), 2019, *long paper*  
**Peng Xu**, Hamidreza Saghir, Jin Sung Kang, Teng Long, Avishek Joey Bose, Yanshuai Cao, Jackie Chi Kit Cheung
4. *Connecting Language and Knowledge with Heterogeneous Representations for Neural Relation Extraction*  
In Proceedings of the 17th Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2019, *short paper*  
**Peng Xu**, Denilson Barbosa
5. *Neural Fine-Grained Entity Type Classification with Hierarchy-Aware Loss*  
In Proceedings of the 16th Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2018, *long oral paper*  
**Peng Xu**, Denilson Barbosa
6. *Matching Resumes to Job Descriptions with Stacked Models*  
The 31st Canadian Conference on Artificial Intelligence, 2018.  
**Peng Xu**, Denilson Barbosa
7. *Investigations on Knowledge Base Embedding for Relation Prediction and Extraction*  
arXiv preprint, 2018  
**Peng Xu**, Denilson Barbosa
8. *Efficient Particle-Mesh Spreading on GPUs*  
In Proceedings of the 15th International Conference on Computational Science (ICCS), 2015  
Xiangyu Guo, Xing Liu, **Peng Xu**, Zhihu Du, Edmond Chow

## Thesis

- *Towards Neural Information Extraction without Manual Annotated Data*  
M.Sc. Thesis, **runner up for the Outstanding Master Thesis Award**

## Teaching

- **Machine Learning** University of Alberta  
*Teaching Assistant* 2016 Fall, 2017 Fall
- **Introduction to the Foundations of Computation II** University of Alberta  
*Teaching Assistant* 2018 Winter
- **Introduction to the Foundations of Computation I** University of Alberta  
*Teaching Assistant* 2017 Winter

## Awards & Honors

ATEC: NLP for Financial Intelligence (hosted by Alibaba), 10th out of 443 teams . . . . . 2018  
Programming Contest of *BUPT*, Gold Medalist . . . . . 2013  
*ACM-ICPC* Hunan Invitational Programming Contest, Bronze Medalist . . . . . 2013  
Third Grade Scholarship for Undergraduates . . . . . 2013-14  
Second Grade Scholarship for Undergraduates . . . . . 2012-13  
Third Grade Scholarship for Undergraduates . . . . . 2011-12

## Skills

- **Research:** Natural Language Processing, Knowledge Base, Machine Learning, Reinforcement Learning, Data Mining, Optimization.
- **Development:** Python (preferred),  $\text{\LaTeX}$ , C/C++, CUDA, Scala, R, Bash, Matlab(Octave)
- **Technology:** TensorFlow, Keras, PyTorch, Scikit-learn, XGBoost, Gensim, Linux, Git, Vim, Tmux, MySQL