Peng Xu

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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** Beijing
  Research Assistant under Prof. Zhihu Du *2014 Summer*
    – Research on efficient partical-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), LaTeX, C/C++, CUDA, Scala, R, Bash, Matlab(Octave)

- **Technology:** TensorFlow, Keras, PyTorch, Scikit-learn, XGBoost, Gensim, Linux, Git, Vim, Tmux, MySql