Wenhan Xiong

University of California, Santa Barbara
Department of Computer Science
3120B, Harold Frank Hall
Santa Barbara, California, 93106

Phone: (805) 252-1636
Email: xwhan@cs.ucsb.edu
Homepage: https://xwhan.github.io/

Research Interests

- Natural Language Processing, Deep Reinforcement Learning, Information Extraction

Education

- **University of California, Santa Barbara**
  Ph.D. in Computer Science, 2016-2021 (expected)
- **University of Science and Technology of China** (Ranking: 2/67)
  B.E. in Automation, 2012-2016.

Experience

- **Research Assistant**, University of California, Santa Barbara, 06/2017-Present
- **Teaching Assistant**, University of California, Santa Barbara, 09/2016-06/2017
- **Research Intern**, University of Western Australia, 07/2015-08/2015

Papers

1. **Wenhan Xiong**, Xiaoxiao Guo, Mo Yu, Bowen Zhou and William Yang Wang, **"Scheduled Policy Optimization for Natural Language Communication with Intelligent Agents"**, submitted to NAACL 2018
2. **Wenhan Xiong**, Thien Hoang and William Yang Wang, **"DeepPath: A Reinforcement Learning Method for Knowledge Graph Reasoning"**, in Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2017**), long oral paper, Copenhagen, Denmark, Sept 9-11, ACL.

Awards & Honors

- Summer Research Fellowship, University of California, Santa Barbara, 2017
- National Scholarship (4/291), University of Science and Technology of China, 2015
- Outstanding Research Performance, University of Western Australia, 2015
- Outstanding Student Scholarship (Gold Prize), University of Science and Technology of China, 2014

Research Projects

- **Natural Language to Navigation Instruction** 08/2017-Present
  We aim to build a semantic parser which can map human language to executable navigation instructions. While previous semantic parsing systems use distant supervision (eg. question-answer pairs in KBQA) or human annotated logical forms, we utilize the environment states to guide the semantic parser. Policy sketches may also be applied.
- **Neural Logic Machine** - https://github.com/xwhan/RL-Reasoner, 04/2017-08/2017
  We use Deep Reinforcement Learning (DRL) to train a theorem proving agent, which is able to reason with recursive rules. While traditional logic reasoning machines require hand-craft rules, which cannot scale to large datasets, the DRL approach can be both interpretable and scalable.
- **DeepPath** - https://github.com/xwhan/DeepPath, 02/2017-04/2017
  Many NLP applications (question answering systems, dialogue agent, etc.) require multi-hop reasoning. While directly building multi-hop reasoning system can be a challenging problem, we use policy gradient to learn the multi-hop reasoning paths from large scale knowledge graphs.

Teaching

- Teaching Assistant, CS32 Object Oriented Design and Implementation, UCSB, Spring 2017
- Teaching Assistant, CS171 Operating Systems, UCSB, Winter 2017
- Teaching Assistant, CS8 Intro to Programming, UCSB, Fall 2017