

## Alexander R. Fabbri

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**SUMMARY** I am a Ph.D. student at Yale University focusing on Natural Language Processing (NLP), in particular text summarization and text generation, along with applications to educational platforms.

**EDUCATION** **Yale University** **New Haven, U.S.**

- *Ph.D. in Computer Science* August 2017 - Present
  - Advisor: Dragomir Radev
  - Relevant Coursework: Artificial Intelligence, Object Oriented Programming, Databases, Natural Language Processing, Deep Learning Theory and Applications, Advanced Natural Language Processing, Optimization Techniques, Topics in Theoretical Machine Learning

**Columbia University** **New York, U.S.**

- *B.A. in Data Science* August 2013 - May 2017
  - GPA: 3.79
  - Awards: Dean's list every semester
  - Relevant Coursework: Analysis of Algorithms, Data Mining, Statistical Inference, Machine Learning, Linear Regression Models, Neural Networks and Deep Learning, Advanced Programming, Applied Data Mining

**Columbia Reid Hall in Paris, Paris VII Denis Diderot** **Paris, France**

- *Study Abroad Program* January 2016 - May 2016
  - Completed coursework in computational linguistics, numerical methods and French during semester abroad

**PUBLICATIONS** **Alexander R. Fabbri**, Patrick Ng, Zhiguo Wang, Bing Xiang. Retrieval-Based Matching for Improved Unsupervised Question Answering. *Under Submission*.

Tao Yu, Rui Zhang, He Yang Er, Suyi Li, Eric Xue, Bo Pang, Xi Victoria Lin, Yi Chern Tan, Tianze Shi, Zihan Li, Youxuan Jiang, Michihiro Yasunaga, Sungrok Shim, Tao Chen, **Alexander R. Fabbri**, Zifan Li, Luyao Chen, Yuwen Zhang, Shreya Dixit, Vincent Zhang, Caiming Xiong, Richard Socher, Walter Lasecki, Dragomir Radev (2019). CoSQL: A Conversational Text-to-SQL Challenge Towards Cross-Domain Natural Language Interfaces to Databases. In *Proceedings of EMNLP 2019*, Hong Kong.

**Alexander R. Fabbri**, Irene Li, Tianwei She, Suyi Li, Dragomir Radev (2019). Multi-News: A Large-Scale Multi-Document Summarization Dataset and Abstractive Hierarchical Model. In *Proceedings of ACL 2019*, Florence, Italy.

Rui Zhang, Caitlin Westerfield, Sungrok Shim, Garrett Bingham, **Alexander R. Fabbri**, Neha Verma, William Hu, Dragomir Radev (2019). Improving Low-Resource Cross-lingual Document Retrieval by Reranking with Deep Bilingual Representations. In *Proceedings of ACL 2019*, Florence, Italy.

Irene Li, **Alexander R. Fabbri**, Robert Tung, Dragomir Radev (2019). What Should I Learn First: Introducing LectureBank for NLP Education and Prerequisite Chain Learning. In *Proceedings of AAAI 2019*, Hawaii, U.S.

Michihiro Yasunaga, Jungo Kasai, Rui Zhang, **Alexander R. Fabbri**, Irene Li, Dan Friedman, and Dragomir Radev (2019). ScisummNet: A Large Annotated Corpus and Content-Impact Models for Scientific Paper Summarization with Citation Networks. In *Proceedings of AAAI 2019*, Hawaii, U.S.

**Alexander R. Fabbri**, Irene Li, Prawat Trairatvorakul, Yijiao He, Weitai Ting, Robert Tung, Caitlin Westerfield and Dragomir Radev (2018). TutorialBank: Using a Manually-Collected Corpus for Prerequisite Chains, Survey Extraction and Resource Recommendation. In *Proceedings of ACL 2018*, Sydney, Australia.

Debanjan Ghosh, **Alexander R. Fabbri**, Smaranda Muresan (2018). Sarcasm Analysis using Conversation Context. In *Computational Linguistics*.

Debanjan Ghosh, **Alexander R. Fabbri**, Smaranda Muresan (2017). The Role of Conversation Context for Sarcasm Detection in Online Interactions. In *Proceedings of SIGdial 2017*, Saarbrücken, Germany. **Best Paper Award**.

## Languages and Technologies

**Programming Languages and Tools:** Python, PyTorch, Tensorflow, NLTK, CoreNLP, UNIX, Git, Java, SQL, R, C/C++  
**Natural Languages :** French (TCF: Level C2); Polish (fluent)

## EXPERIENCE

*Ph.D. Student* at Yale University

**August 2017 - Present**

- Works with Professor Dragomir Radev on projects related to summarization, text generation, prerequisite chain learning and information retrieval to facilitate the education of scientific topics.
- Heads the AAN (All About NLP) project which maintains the largest manually curated search engine of tutorials on Natural Language Processing.
- Worked on the IARPA-funded MATERIAL project on cross-lingual information retrieval. Worked on improving cutoff for length of retrieved ranked list.

*Applied Scientist Intern* at Amazon AWS AI

**May 2019 - August 2019**

- Worked on unsupervised question generation from context-answer pairs to improve unsupervised question answering when faced with low-resource domains, building upon work on style transfer and unsupervised machine translation.
- Mentored by Patrick Ng, Zhiguo Wang and Bing Xiang.

*Undergraduate Research Assistant* at Center for Computational Learning Systems, Columbia University

**May 2016 - May 2017**

- Worked in the Natural Language Processing group on fine-grained sentiment analysis under the direct supervision of Dr. Owen Rambow as part of the team's TAC KBP BeSt Evaluation submission during summer 2016.
- Worked with Dr. Smaranda Muresan and then PhD student Dr. Debanjan Ghosh on deep learning methods for irony and the effects of conversational context, resulting in our SIGdial conference publication, which won best paper award.

***Undergraduate Research Assistant at Columbia Reid Hall in Paris, Columbia University*** **Jan 2016 - May 2016**

- Worked on sentiment analysis of Twitter with Dr. Kata Gabor through Reid Hall's Directed Research Program. Conducted weekly meetings and gave a final presentation (in French) and submitted a 30-page memoire (in English).