

Alexander R. Fabbri

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SUMMARY

I am a final-year Ph.D. candidate at Yale University focusing on Natural Language Processing (NLP), in particular subproblems of text summarization such as multi-document summarization, summarization evaluation and summarization in low-resource settings.

EDUCATION

Yale University

New Haven, U.S.

- *Ph.D. in Computer Science* August 2017 - May 2021 (Expected)
 - 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, Simeng Han, Haoyuan Li, Haoran Li, Marjan Ghazvininejad, Shafiq Joty, Dragomir Radev, Yashar Mehdad. Improving Zero and Few-Shot Abstractive Summarization with Intermediate Fine-tuning and Data Augmentation. Under submission.

Alexander R. Fabbri*, Wojciech Kryciski*, Bryan McCann, Caiming Xiong, Richard Socher, Dragomir Radev. SummEval: Re-evaluating Summarization Evaluation. Accepted with revisions to TACL.

Irene Li, **Alexander R. Fabbri**, Swapnil Hingmire, Dragomir Radev. R-VGAE: Relational-variational Graph Autoencoder for Unsupervised Prerequisite Chain Learning. In *Proceedings of COLING 2020*.

Alexander R. Fabbri*, Patrick Ng*, Zhiguo Wang, Bing Xiang. Template-Based Question Generation from Retrieved Sentences for Improved Unsupervised Question Answering. In *Proceedings of ACL 2020*.

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 a collaboration between Yale and the Language and Translation Tech-

nologies Team (LATTE) at Facebook AI.

- Currently focusing on conversational summarization.
- Worked on 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.

Part-time Student Researcher at Facebook AI September 2020 - Present

- Working on sentence-fusion in multi-document summarization to improve summary coherence and faithfulness.
- Mentored by Xiaojian Wu, Srini Iyer and Mona Diab.

Research Intern at Facebook AI

June 2020 - August 2020

- Worked on multi-perspective answer summarization of community question-answering forums, developing a novel dataset creation pipeline and models to ensure faithful, multi-perspective answer summaries.
- Mentored by Xiaojian Wu, Srini Iyer and Mona Diab.

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).

Service and Honors

Program Committee or Reviewer: EMNLP 2019 Workshop on New Frontiers in Summarization, ACL 2020, SDP 2020, W-NUT 2020, NAACL-HLT 2021
Outstanding Reviewer: ACL 2020

Misc

Dual American-Polish citizenship