Alexander R. Fabbri

New York City, U.S.
+1 (516) 729-9528
alex.fabbri.ny@gmail.com
alex-fabbri.github.io
Google Scholar

SUMMARY

I am a Senior Research Scientist at Salesforce AI Research. I received my Ph.D. at Yale University, with my thesis entitled "Text Summarization Across High and Low-resource Settings." My work focuses on text summarization subproblems such as evaluation and factual consistency and on LLM safety.

EDUCATION

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

- *Ph.D. in Computer Science*   August 2017 - May 2021
  - 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

EXPERIENCE

Salesforce AI
Senior Research Scientist   **August 2023 - Present**
Researcher II   **July 2021 - August 2023**

- Leading text summarization research under Jason Wu, focusing on areas such as evaluation, factual consistency, and long-context modeling.
- Driving applied projects on summarization tailored to Salesforce use-cases, particularly customer-service chat summarization.
- Spearheading efforts on Salesforce's safety alignment of internal models.

Ph.D. Student at Yale University   August 2017 - May 2021

- Worked with Professor Dragomir Radev on projects related to summarization, text generation, prerequisite chain learning, and information retrieval to facilitate the education of scientific topics.
- Headed a collaboration between Yale and the Language and Translation Technologies Team (LATTE) at Facebook AI focused on conversational summarization and summarization crowdsourcing.
- 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 the length of the retrieved ranked list.

Part-time Researcher at Facebook AI   September 2020 - January 2021

- Worked 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 Ph.D. student Dr. Debanjan Ghosh on deep learning methods for irony and the effects of conversational context, resulting in our SIGdial conference publication, which won the 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).

PUBLICATIONS Evaluating Cultural and Social Awareness in LLM Agents. Haoyi Qiu, Divyansh Agarwal, **Alexander R. Fabbri**, Chien-Sheng Wu. Under Review.

Prompt Leakage Effect and Mitigation Strategies for Multi-Turn LLM Applications. Divyansh Agarwal, **Alexander R. Fabbri**, Ben Risher, Philippe Laban, Shafiq Joty, Chien-Sheng Wu. In *Industry Track of EMNLP 2024*.

Summary of a Haystack: A Challenge to Long-Context LLMs and RAG Systems. Philippe Laban*, **Alexander R Fabbri***, Caiming Xiong, Chien-Sheng Wu. In *Proceedings of EMNLP 2024*.

Benchmarking Generation and Evaluation Capabilities of Large Language Models for Instruction Controllable Summarization. Yixin Liu*, **Alexander R. Fabbri***, Jiawen Chen, Yilun Zhao, Simeng Han, Shafiq Joty, Pengfei Liu, Dragomir Radev, Chien-Sheng Wu, Arman Cohan. In *Proceedings of NAACL 2024*.

Fair Abstractive Summarization of Diverse Perspectives. Yusen Zhang, Nan Zhang, Yixin Liu, **Alexander R. Fabbri**, Junru Liu, Ryo Kamoi, Xiaoxin Lu, Caiming Xiong, Jieyu Zhao, Dragomir Radev, Kathleen McKeown, Rui Zhang. In *Proceedings of NAACL 2024*.

On Learning to Summarize with Large Language Models as References. Yixin Liu, **Alexander R. Fabbri**, Pengfei Liu, Dragomir Radev, Arman Cohan. In *Proceedings of NAACL 2024*.

Lexical Repetitions Lead to Rote Learning: Unveiling the Impact of Lexical Overlap in Train and Test Reference Summaries. Prafulla Kumar Choubey, **Alexander R. Fabbri**, Caiming Xiong, Chien-Sheng Wu. In *Findings of EMNLP 2023*.

SummEdits: Measuring LLM Ability at Factual Reasoning Through The Lens of Summarization. Philippe Laban, Wojciech Kryscinski, Divyansh Agarwal, **Alexander R. Fabbri**, Caiming Xiong, Shafiq Joty, Chien-Sheng Wu. In *Proceedings of EMNLP 2023*.

Towards Interpretable and Efficient Automatic Reference-Based Summarization Evaluation. Yixin Liu, **Alexander R. Fabbri**, Yilun Zhao, Pengfei Liu, Shafiq Joty, Chien-Sheng Wu, Caiming Xiong, Dragomir Radev. In *Proceedings of EMNLP 2023*.

Revisiting the Gold Standard: Grounding Summarization Evaluation with Robust Human Evaluation. Yixin Liu*, **Alexander R Fabbri***, Pengfei Liu, Yilun Zhao, Linyong Nan, Ruilin Han, Simeng Han, Shafiq Joty, Chien-Sheng Wu, Caiming Xiong, Dragomir Radev. In *Proceedings of ACL 2023*.

Generating EDU Extracts for Plan-Guided Summary Re-Ranking. Griffin Adams, **Alexander R. Fabbri**, Faisal Ladhak, Kathleen McKeown, Noemie Elhadad. In *Proceedings of ACL 2023*.

Socratic Pretraining: Question-Driven Pretraining for Controllable Summarization. Artidoro Pagnoni, **Alexander R Fabbri**, Wojciech Kryscinski, Chien-Sheng Wu. In *Proceedings of ACL 2023*.

Zero-Shot Opinion Summarization with GPT-3. Adithya Bhaskar, **Alexander R Fabbri**, Greg Durrett. In *Findings of ACL 2023*.

Understanding Factual Errors in Summarization: Errors, Summarizers, Datasets, Error Detectors. Liyan Tang, Tanya Goyal, **Alexander R Fabbri**, Philippe Laban, Jiacheng Xu, Semih Yahvuz, Wojciech Kryciski, Justin F Rousseau, Greg Durrett. In *Proceedings of ACL 2023.*

CaPE: Contrastive Parameter Ensembling for Reducing Hallucination in Abstractive Summarization. Prafulla Kumar Choubey, **Alexander R. Fabbri**, Jesse Vig, Chien-Sheng Wu, Wenhao Liu, Nazneen Fatema Rajani. In *Proceedings of ACL 2023.*

Folio: Natural language reasoning with first-order logic. Simeng Han, Hailey Schoelkopf, Yilun Zhao, Zhenting Qi, Martin Riddell, Luke Benson, Lucy Sun, Ekaterina Zubova, Yujie Qiao, Matthew Burtell, David Peng, Jonathan Fan, Yixin Liu, Brian Wong, Malcolm Sailor, Ansong Ni, Linyong Nan, Jungo Kasai, Tao Yu, Rui Zhang, Shafiq Joty, **Alexander R Fabbri**, Wojciech Kryscinski, Xi Victoria Lin, Caiming Xiong, Dragomir Radev. EMNLP 2024.

Improving Factual Consistency in Summarization with Compression-Based Post-Editing. **Alexander R Fabbri**, Prafulla Kumar Choubey, Jesse Vig, Chien-Sheng Wu, Caiming Xiong. In *Proceedings of EMNLP 2022.*

CREATIVESUMM: Shared Task on Automatic Summarization for Creative Writing. Divyansh Agarwal, **Alexander R Fabbri**, Simeng Han, Wojciech Kryscinski, Faisal Ladhak, Bryan Li, Kathleen McKeown, Dragomir Radev, Tianyi Zhang, Sam Wiseman. In *Proceedings of The Workshop on Automatic Summarization for Creative Writing 2022.*

QAFactEval: Improved QA-Based Factual Consistency Evaluation for Summarization. **Alexander R. Fabbri**, Chien-Sheng Wu, Wenhao Liu, Caiming Xiong. In *Proceedings of NAACL 2022.*

Jesse Vig, Alexander Fabbri, Wojciech Kryscinski, Chien-Sheng Wu, Wenhao Liu. Exploring Neural Models for Query-Focused Summarization. In *Proceedings of NAACL 2022.*

AnswerSumm: A Manually-Curated Dataset and Pipeline for Answer Summarization. **Alexander R. Fabbri**, Xiaojian Wu, Srini Iyer, Mona Diab. In *Proceedings of NAACL 2022.*

Bidimensional Leaderboards: Generate and Evaluate Language Hand in Hand. Jungo Kasai, Keisuke Sakaguchi, Ronan Le Bras, Lavinia Dunagan, Jacob Morrison, **Alexander R Fabbri**, Yejin Choi, Noah A Smith. In *Proceedings of NAACL 2022.*

Investigating Crowdsourcing Protocols for Evaluating the Factual Consistency of Summaries. Xiangru Tang, **Alexander R. Fabbri**, Haoran Li, Ziming Mao, Griffin Adams, Borui Wang, Asli Celikyilmaz, Yashar Mehdad, Dragomir Radev. In *Proceedings of NAACL 2022.*

Surfer100: Generating Surveys From Web Resources, Wikipedia-style. Irene Li, **Alexander R. Fabbri**, Rina Kawamura, Yixin Liu, Xiangru Tang, Jaesung Tae, Chang Shen, Sally Ma, Tomoe Mizutani, Dragomir Radev. In *Proceedings of LREC 2022.*

Practical Guide to Natural Language Processing for Radiology. Ali Mozayan, **Alexander R. Fabbri**, Michelle Maneevese, Irena Tocino, Sophie Chheang. In Radiograph-

ics 2022.

ConvoSumm: Conversation Summarization Benchmark and Improved Abstractive Summarization with Argument Mining. **Alexander R. Fabbri**, Faiaz Rahman, Imad Rizvi, Borui Wang, Haoran Li, Yashar Mehdad, Dragomir Radev. In *Proceedings of ACL 2021.*

Improving Zero and Few-Shot Abstractive Summarization with Intermediate Fine-tuning and Data Augmentation. **Alexander R. Fabbri**, Simeng Han, Haoyuan Li, Haoran Li, Marjan Ghazvininejad, Shafiq Joty, Dragomir Radev, Yashar Mehdad. In *Proceedings of NAACL 2021.* SummEval: Re-evaluating Summarization Evaluation. **Alexander R. Fabbri***, Wojciech Kryscinski*, Bryan McCann, Caiming Xiong, Richard Socher, Dragomir Radev. In *Proceedings of TACL 2021.*

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

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

CoSQL: A Conversational Text-to-SQL Challenge Towards Cross-Domain Natural Language Interfaces to Databases. 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). In *Proceedings of EMNLP 2019*, Hong Kong.

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

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

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

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

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

Sarcasm Analysis using Conversation Context. Debanjan Ghosh, **Alexander R.**

Fabbri, Smaranda Muresan (2018). In *Computational Linguistics*.

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

Languages and Technologies	**Programming Languages and Tools:** Python, PyTorch, Tensorflow, UNIX, Git, Java, SQL **Natural Languages :** French (TCF: Level C2); Polish (fluent)
Service and Honors	**Program Committee or Reviewer**: EMNLP 2019 Summarization Workshop, ACL 2020, SDP 2020, W-NUT 2020, EACL 2021, NAACL-HLT 2021, ACL 2021, EMNLP 2021, JAIR 2021, NLPCC 2021, ACL 2022, NAACL 2022, EMNLP 2022, NLPCC 2022, SDP@COLING 2022, W-NUT@COLING 2022, Automatic Summarization for Creative Writing@COLING 2022, EACL 2023, ACL 2023, ARR Reviewer Oct 2021 - Present, ARR Action Editor Dec 2022 - Present **Outstanding Reviewer**: ACL 2020
Misc	Dual American-Polish citizenship