Shiyue Zhang

https://zhangshiyue.github.io

May 29, 2025

Email:byryuer@gmail.com

Work Experience

Aug. 2023–Present — **Research Engineer**
Bloomberg, NYC, USA

- Benchmarking large language models (LLMs) on finance-related benchmarks
- Finetuning LLMs on finance-related tasks
- Continued pre-training LLMs to inject financial domain knowledge
- Building retrieval systems and leveraging retrieval in model training and evaluation
- Conducting automatic evaluations for LLM generations

Education

Aug. 2018–Aug. 2023 — **Ph.D. in Computer Science**
University of North Carolina at Chapel Hill, Chapel Hill, USA
Advised by Mohit Bansal

- Research topic was natural language processing (NLP)
- Mainly focused on language generation, including machine translation, summarization, and language modeling
- Thesis: Towards Reliable and Inclusive Natural Language Generation

Sep. 2011–Mar. 2018 — **M.E. and B.E. in Communication Engineering**
Beijing University of Posts and Telecommunications, Beijing, China

Internship Experience

May 2022–Aug. 2022 — **Software Engineer Intern**
Bloomberg, NYC, USA
Supervised by Ozan Irsoy, Steven Lu, Shijie Wu, David Rosenberg, and Mark Dredze

- Worked on language modeling
- To overcome the over-generalization problem of MLE-trained LMs, we propose a novel training objective, MixCE, that combines forward and reverse cross-entropies

May 2021–Aug. 2021 — **Research Intern**
Facebook, remote from Chapel Hill, USA
Supervised by Vishrav Chaudhary and Francisco (Paco) Guzmán

- Worked on multilingual tokenization
- Analyzed how downstream translation performance is affected by the language imbalance in the data used to train a multilingual tokenizer

June 2020–Aug. 2020 — **Research Intern**
Microsoft, remote from Chapel Hill, USA
Supervised by Asli Celikyilmaz

- Worked on email thread summarization
- Collected a dataset with email threads and human-written summaries, and benchmarked multiple generation models on this dataset

Sep. 2016–June 2018 — **Research Intern**
CSLT at Tsinghua University, Beijing, China
Supervised by Dong Wang and Yang Feng

- Worked on machine translation
- Augmented neural machine translation models with a memory component that stores discrete dictionary information

Selected Awards

2023 EECS Rising Star
2021 Bloomberg Data Science PhD Fellowship
2015 Excellent Graduate of BUPT
2014, 2013 National Scholarship of China

Publications

2025 Bang An, **Shiyue Zhang**, and Mark Dredze. *RAG LLMs are Not Safer: A Safety Analysis of Retrieval-Augmented Generation for Large Language Models* NAACL 2025

2023 David Wan, **Shiyue Zhang**, and Mohit Bansal. *HistAlign: Improving Context Dependency in Language Generation by Aligning with History* EMNLP 2023

2023 **Shiyue Zhang**, Shijie Wu, Ozan Irsoy, Steven Lu, Mohit Bansal, Mark Dredze and David Rosenberg. *MixCE: Training Autoregressive Language Models by Mixing Forward and Reverse Cross-Entropies* ACL 2023

2023 Derek Tam, Anisha Mascarenhas, **Shiyue Zhang**, Sarah Kwan, Mohit Bansal, Colin Raffel. *Evaluating the Factual Consistency of Large Language Models Through Summarization* Findings of ACL 2023

2023 **Shiyue Zhang***, David Wan*, and Mohit Bansal (*equal contribution). *Extractive is not Faithful: An Investigation of Broad Unfaithfulness Problems in Extractive Summarization* ACL 2023

2023 Swarnadeep Saha, **Shiyue Zhang**, Peter Hase, Mohit Bansal. *Summarization Programs: Interpretable Abstractive Summarization with Neural Modular Trees* ICLR 2023

2022 Xiang Zhou, **Shiyue Zhang**, and Mohit Bansal. *Masked Part-Of-Speech Model: Does modeling long context help unsupervised POS-tagging?* NAACL 2022

2022 Yinuo Hu*, **Shiyue Zhang***, Viji Sathy, A. T. Panter, and Mohit Bansal (*equal contribution). *SETSum: Summarization and Visualization of Student Evaluations of Teaching* NAACL Demo 2022

2022 **Shiyue Zhang**, Vishrav Chaudhary, Naman Goyal, James Cross, Guillaume Wenzek, Mohit Bansal, and Francisco Guzman. *How Robust is Neural Machine Translation to Language Imbalance in Multilingual Tokenizer Training?* AMTA 2022

2022 **Shiyue Zhang**, Benjamin Frey, and Mohit Bansal. *How can NLP Help Revitalize Endangered Languages? A Case Study and Roadmap for the Cherokee Language* ACL 2022 Theme Track

2021 **Shiyue Zhang** and Mohit Bansal. *Finding a Balanced Degree of Automation for Summary Evaluation* EMNLP 2021

2021 **Shiyue Zhang**, Benjamin Frey, and Mohit Bansal. *Cherokee-English Machine Translation Demo with Quality Estimation and Corrective Feedback* ACL Demo 2021, [News: The sanctity of Cherokee]

2021 **Shiyue Zhang**, Asli Celikyilmaz, Jianfeng Gao, and Mohit Bansal. *EmailSum: Abstractive Email Thread Summarization* ACL 2021

2021 Zineng Tang, **Shiyue Zhang**, Hyounghun Kim, and Mohit Bansal. *Continuous Language Generative Flow* ACL 2021

2020 **Shiyue Zhang**, Benjamin Frey, and Mohit Bansal. *ChrEn: Cherokee-English Machine Translation for Endangered Language Revitalization* EMNLP 2020

2020 Peter Hase, **Shiyue Zhang**, Harry Xie, and Mohit Bansal. *Leakage-Adjusted Simulatability: Can Models Generate Non-Trivial Explanations of Their Behavior in Natural Language?* Findings of EMNLP 2020

2019 **Shiyue Zhang** and Mohit Bansal. *Addressing Semantic Drift in Question Generation for Semi-Supervised Question Answering* EMNLP 2019

2018 Jiyuan Zhang, Zheling Zhang, **Shiyue Zhang**, and Dong Wang. *VV-Couplet: An open source Chinese couplet generation system* APSIPA ASC 2018

2017 Lantian Li, Zhiyuan Tang, Dong Wang, Andrew Abel, Yang Feng, and **Shiyue Zhang**. *Collaborative learning for language and speaker recognition* NCMMSC 2017

2017 Yang Feng, **Shiyue Zhang**, Andi Zhang, Dong Wang, and Andrew Abel. *Memory-augmented Neural Machine Translation* EMNLP 2017

2017 **Shiyue Zhang**, Gulnigar Mahmut, Dong Wang, and Askar Hamdulla. *Memory-augmented Chinese-Uyghur Neural Machine Translation* APSIPA ASC 2017

2017 Aodong Li, **Shiyue Zhang**, Dong Wang, and Thomas Fang Zheng. *Enhanced Neural Machine Translation by Learning from Draft* APSIPA ASC 2017

2017 Jiyuan Zhang, Yang Feng, Dong Wang, Yang Wang, Andrew Abel, **Shiyue Zhang**, and Andi Zhang. *Flexible and Creative Chinese Poetry Generation Using Neural Memory* ACL 2017

2017 Dong Wang, Thomas Fang Zheng, Zhiyuan Tang, Ying Shi, Lantian Li, **Shiyue Zhang**, Hongzhi Yu, Guanyu Li, Shipeng Xu, Askar Hamdulla, Mijit Ablimit, and Gulnigar Mahmut. *M2ASR: Ambitions and first year progress* O-COCOSDA 2017

2017 Zhiyuan Tang, Ying Shi, Dong Wang, Yang Feng, **Shiyue Zhang**. *Memory visualization for gated recurrent neural networks in speech recognition* ICASSP 2017

Preprints

2025 Shuyang Cao, Karthik Radhakrishnan, David Rosenberg, Steven Lu, Pengxiang Cheng, Lu Wang, **Shiyue Zhang**. *Evaluating the Retrieval Robustness of Large Language Models* on arXiv

2025 Ozan Irsoy*, Pengxiang Cheng*, Jennifer L. Chen*, Daniel Preotiuc-Pietro*, **Shiyue Zhang***, Duccio Pappadopulo* (*author ordering chosen at random). *Improving Instruct Models for Free: A Study on Partial Adaptation* on arXiv

2024 **Shiyue Zhang***, David Wan*, Arie Cattan, Ayal Klein, Ido Dagan, Mohit Bansal (*equal contribution). *QAPyramid: Fine-grained Evaluation of Content Selection for Text Summarization* on arXiv

2024 Arie Cattan, Paul Roit, **Shiyue Zhang**, David Wan, Roee Aharoni, Idan Szpektor, Mohit Bansal, Ido Dagan. *Localizing Factual Inconsistencies in Attributable Text Generation* on arXiv

2017 **Shiyue Zhang**, Pengtao Xie, Dong Wang, and Eric P. Xing. *Medical Diagnosis From Laboratory Tests by Combining Generative and Discriminative Learning* on arXiv

Technical Reports

2017 Yang Wang, Dong Wang, **Shiyue Zhang**, Yang Feng, Shiyao Li, and Qiang Zhou. *Deep Q-trading*

Professional Services

Area Chair	ACL, NAACL, EMNLP, EACL
Session Chair	AMTA
Reviewer	ACL Rolling Review, NSF Proposal
Conference Reviewer	ACl, EMNLP, NAACL, COLING, AAAI, AKBC
Journal Reviewer	Natural Language Engineering (JNLE)
Workshop Reviewer	SRW@ACL, Eval4NLP, SRW@EACL

Skills

Deep Learning Frameworks:	PyTorch, TensorFlow
Programming Languages:	Python
Speaking Languages:	Chinese (Native), English (Full Professional Proficiency)