Yong Zheng-Xin

RESEARCH INTERESTS I work on safety alignment, synthetic data generation, and low-resource NLP. My broad research vision is to develop LLMs that are safe and helpful for everyone around the world.

EDUCATION

Brown University, Providence, RI Ph.D. Student, Computer Science Advisor: Prof. Stephen H. Bach

07/2021 - Present

Minerva University, San Francisco, CA

B.Sc., Computer Science (Major) and Business (Minor)

09/2017 - 05/2021

Advisor: Prof. Patrick D Watson

Major GPA: 4.0/4, Cumulative GPA: 4.0/4

WORK EXPERIENCE **Meta** — Fundamental AI Research (FAIR)

Research Scientist Intern

06/2024 - Present

- Measuring intrinsic toxicity in speech models.
- Minimizing accent biases in Massively Multilingual Speech models.
- · Mentors: Jean Maillard, Michael Auli & Marta Costa-Jussà

Meta — GenAI Safety Alignment

Research Collaborator

07/2024 - 10/2024

- Safety research on multilingual LLMs' jailbreaks.
- Deliverable: Mechanistic explanations for cross-lingual finetuning attacks
- Mentor: Jianfeng Chi

Cohere For Al — Aya Responsible Release Team

Research Collaborator

05/2023 - 02/2024

- Safety red-teaming for multilingual LLM Aya-101.
- Deliverable: Aya Model (co-first author for safety)
- · Mentors: Iulia Kreutzer & Sara Hooker

BigScience — Multilingual Modeling Group

Research Lead/Collaborator

08/2021 - 12/2022

- Led language adaptation research of BLOOM to low-resource languages.
- Deliverables: BLOOM+1 (Research Lead), PromptSource, To, BLOOMZ, BLOOM
- Mentor: Vassilina Nikoulina

Google Summer of Code — FrameNet Project

Research Intern

06/2019 - 12/2020

- Expanded FrameNet and investigated cross-lingual semantic frame alignment.
- Deliverables: SDEC-AD, Frame Shift Prediction
- Mentors: Tiago T. Torrent, Oliver Czulo & Collin F. Baker

SELECTED **PUBLICATIONS** (* INDICATES CO-FIRST AUTHORSHIP)

Safety Alignment

[16] Towards Understanding the Fragility of Multilingual LLMs against Fine-Tuning

Samuele Poppi, Zheng-Xin Yong, Yifei He, Bobbie Chern, Han Zhao, Aobo Yang, lianfeng Chi In submission

- [15] Preference Tuning For Toxicity Mitigation Generalizes Across Languages Xiaochen Li*, **Zheng-Xin Yong***, Stephen H. Bach *EMNLP 2024 Findings*
- [14] Aya Model: An Instruction Finetuned Open-Access Multilingual Language Model Ahmet Üstün*, Viraat Aryabumi*, Zheng-Xin Yong*, Wei-Yin Ko*, Daniel D'souza*, Gbemileke Onilude, Neel Bhandari, Shivalika Singh, Hui-Lee Ooi, Amr Kayid, Freddie Vargus, Phil Blunsom, Shayne Longpre, Niklas Muennighoff, Marzieh Fadaee, Julia Kreutzer, Sara Hooker ACL 2024

Best Paper Award. Featured on: The New York Times | The Washington Post.

[13] Low-Resource Languages Jailbreak GPT-4

Zheng-Xin Yong, Cristina Menghini, Stephen Bach

NeurIPS 2023 Socially Responsible Language Modeling Workshop

Best Paper Award. Featured on: New Scientist | The Register.

Low-Resource NLP (Synthetic Data Generation and Multilingual LLMs)

- [12] LexC-Gen: Generating Data for Extremely Low-Resource Languages with Large Language Models and Bilingual Lexicons Zheng-Xin Yong, Cristina Menghini, Stephen Bach EMNLP 2024 Findings
- [11] Prompting Multilingual Large Language Models to Generate Code-Mixed Texts: The Case of South East Asian Languages

 Zheng-Xin Yong, Ruochen Zhang, ..., Alham Fikri Aji (15 authors)

 EMNLP 2023 CALCS Workshop
 Featured on: WIRED.
- [10] BLOOM+1: Adding Language Support to BLOOM for Zero-Shot Prompting **Zheng-Xin Yong**, Hailey Schoelkopf, ..., Vassilina Nikoulina (15 authors) *ACL* 2023

OTHER PUBLICATIONS

- [9] CVQA: Culturally-diverse Multilingual Visual Question Answering Benchmark David Romero, ..., **Zheng-Xin Yong**, ..., Thamar Solorio, Alham Fikri Aji (75 authors) NeurIPS 2024 Datasets and Benchmarks
- [8] SEACrowd: A Multilingual Multimodal Data Hub and Benchmark Suite for Southeast Asian Languages Holy Lovenia, ..., Zheng-Xin Yong, Samuel Cahyawijaya (61 authors) EMNLP 2024
- [7] A Safe Harbor for AI Evaluation and Red Teaming Shayne Longpre, ..., Zheng-Xin Yong, ..., Percy Liang, Peter Henderson (23 authors)
 ICML 2024 (Position Paper)
 Oral, 1.6% of Submitted Papers (160/9653)
- [6] Representativeness as a Forgotten Lesson for Multilingual and Code-switched Data Collection and Preparation
 A. Seza Doğruöz, Sunayana Sitaram, Zheng-Xin Yong EMNLP Findings 2023
- [5] Crosslingual Generalization through Multitask Finetuning Niklas Muennighoff, ..., Zheng-Xin Yong, ..., Colin Raffel (19 authors) ACL 2023

- [4] PromptSource: An Integrated Development Environment and Repository for Natural Language Prompts Stephen Bach*, Victor Sanh*, **Zheng-Xin Yong**, ..., Alexander M. Rush (27 authors) ACL Demo 2023
- [3] The Decades Progress on Code-Switching Research in NLP: A Systematic Survey on Trends and Challenges Genta Indra Winata, Alham Fikri Aji, Zheng-Xin Yong, Thamar Solorio **ACL Findings 2023**
- [2] BLOOM: A 176B-Parameter Open-Access Multilingual Language Model BigScience Workshop (including **Zheng-Xin Yong** and 300+ authors) Preprint 2023
- [1] Multitask Prompted Training Enables Zero-Shot Task Generalization Victor Sanh*, ..., **Zheng-Xin Yong**, ..., Alexander M. Rush (41 authors) Spotlight, 5% of submitted papers (176/3391)

AWARDS

Outstanding Reviewer Award at EMNLP 2024	2024
Best Paper Award at ACL 2024	2024
Best Paper Award at NeurIPS 2023 Socially Responsible Language Modeling	2023
(SoLaR) Workshop	
3rd Best App Overall at FirstNet Public Safety Hackathon	2018
Best Use of ESRI at FirstNet Public Safety Hackathon	2018
Grand Prize Winner at #100Hacks Hackathon for Puerto Rico	2017
Grand Prize Winner at NCSV Innovate NUS Hackathon	2017
Open Category Grand Prize at SIA Airlines AppChallenge	2017
Global Finalist at Google Science Fair	2016
Outstanding A-Level Cambridge Learner Award for Perfect Score in Maths	2016

SELECTED TALKS

Meta AI: LLM Detoxification Generalizes Across Languages, Aug 2024.

The Alan Turing Institute, London Data Week: Multilingual AI Safety, Jul 2024.

Cohere For AI, C4AI Gatherings: Aya Multilingual Safety, Feb 2024. Cohere For Al, Aya Grande Finale: Aya Responsible Release, Feb 2024.

Cohere For AI, Closing the Contribution Chapter: Malay Ambassador, Dec 2023.

MEDIA

SELECTED PRESS & GPT-4 gave advice on planning terrorist attacks when asked in Zulu (New Scientist,

ChatGPT Is Cutting Non-English Languages Out of the AI Revolution (WIRED, 2023)

SERVICES **Area Chair/Program Committee:**

EMNLP 2023 (Multilingualism and Linguistic Diversity)

Conference/Workshop Reviewer:

EMNLP 2024 (Outstanding Reviewer)

COLM 2024

ARR 2021-Present (including all *ACL conferences)

ACL 2021-2023

Outreach and Mentorship Service Programs:

Deep Learning Indaba Mentorship Service (2022 - 2023)

Brown Computer Science exploreCSR (2022) Minerva-Masason Mentoring Program (2019 - 2021)

CONTACT personal website: yongzx.github.io INFORMATION email: contact.yong@brown.edu