Yong Zheng-Xin

personal website: yongzx.github.io CONTACT INFORMATION email: contact.yong@brown.edu Brown University, Providence, RI **EDUCATION** Ph.D. Student, Computer Science 07/2021 - Present Advisor: Prof. Stephen H. Bach 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 Brown University, Ph.D. Student RELEVANT Supervisor: Stephen Bach 07/2021 - Present **EMPLOYMENT** Meta AI, Research Scientist Intern Fundamental AI Research (FAIR) 06/2024 - Present • Safety research for multilingual speech model MMS. • Supervisor: Jean Maillard Cohere For AI, Research Collaborator Aya Responsible Release 05/2023 - 02/2024 • Safety red-teaming for multilingual LLM Aya-101. Deliverable: Ava Model (co-first author) • Supervisors: Sara Hooker & Julia Kreutzer BigScience, Research Collaborator/Lead Multilingual Modeling Group 08/2021 - 12/2022 • Led language adaptation research of BLOOM to low-resource languages. Helped with data collection for the earliest instruction-following models, namely To (English) and BLOOMZ (multilingual). • Deliverables: BLOOM+1 (Research Lead), To, PromptSource, BLOOMZ, BLOOM • Supervisor: Vassilina Nikoulina FrameNet Project, Research Intern Google Summer of Code 2019 and 2020 06/2019 - 12/2020 • Expanded FrameNet through semi-supervised learning and anomaly detection. • Investigated cross-lingual alignment of semantic frames in FrameNet graph. · Deliverables: SDEC-AD, Frame Shift Prediction • Supervisors: Collin F. Baker, Tiago T. Torrent, Oliver Czulo Best Paper Award at NeurIPS 2023 Socially Responsible Language Modeling 2023 **AWARDS** (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

Global Finalist at Google Science Fair

2017

2016

FEATURED PUBLICATIONS (* INDICATES CO-AUTHORSHIP)

Responsible AI and AI Safety

- [1] Preference Tuning For Toxicity Mitigation Generalizes Across Languages Xiaochen Li*, **Zheng-Xin Yong***, Stephen H. Bach In submission.
- [2] 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. (Role in Project: Multilingual safety red-teaming)

[3] Low-Resource Languages Jailbreak GPT-4 **Zheng-Xin Yong**, Cristina Menghini, Stephen H. Bach

NeurIPS 2023 Socially Responsible Language Modeling Workshop **Best Paper Award**. Work also featured in New Scientist and other media.

Low-Resource NLP and Multilingual Synthetic Data Generation

- [4] LexC-Gen: Generating Data for Extremely Low-Resource Languages with Large Language Models and Bilingual Lexicons Zheng-Xin Yong, Cristina Menghini, Stephen H. Bach In submission.
- [5] Prompting Multilingual Large Language Models to Generate Code-Mixed Texts: The Case of South East Asian Languages

Zheng-Xin Yong, Ruochen Zhang, Jessica Zosa Forde, Skyler Wang, Arjun Subramonian, Holy Lovenia, Samuel Cahyawijaya, Genta Indra Winata, Lintang Sutawika, Jan Christian Blaise Cruz, Yin Lin Tan, Long Phan, Rowena Garcia, Thamar Solorio, Alham Fikri Aji

EMNLP 2023 CALCS Workshop. Work also featured on WIRED.

[6] BLOOM+1: Adding Language Support to BLOOM for Zero-Shot Prompting **Zheng-Xin Yong**, Hailey Schoelkopf, Niklas Muennighoff, Alham Fikri Aji, David Ifeoluwa Adelani, Khalid Almubarak, M Saiful Bari, Lintang Sutawika, Jungo Kasai, Ahmed Baruwa, Genta Indra Winata, Stella Biderman, Edward Raff, Dragomir Radev, Vassilina Nikoulina *ACL* 2023.

OTHER PUBLICATIONS

- [7] CVQA: Culturally-diverse Multilingual Visual Question Answering Benchmark David Romero, ..., **Zheng-Xin Yong**, ..., Thamar Solorio, Alham Fikri Aji (75 authors) In submission
- [8] SEACrowd: A Multilingual Multimodal Data Hub and Benchmark Suite for Southeast Asian Languages Holy Lovenia, ..., Zheng-Xin Yong, Samuel Cahyawijaya (61 authors) In submission
- [9] A Safe Harbor for AI Evaluation and Red Teaming Shayne Longpre, ..., **Zheng-Xin Yong**, ..., Percy Liang, Peter Henderson (23 authors) *ICML* 2024 Oral (Position Paper).
- [10] 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.

- [11] Crosslingual Generalization through Multitask Finetuning Niklas Muennighoff, ..., **Zheng-Xin Yong**, ..., Edward Raff, Colin Raffel (19 authors) ACL 2023.
- [12] PromptSource: An Integrated Development Environment and Repository for Natural Language Prompts Stephen H. Bach*, Victor Sanh*, Zheng-Xin Yong, ..., Alexander M. Rush (27 authors) ACL Demo 2023.
- [13] 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.
- [14] BLOOM: A 176B-Parameter Open-Access Multilingual Language Model BigScience Workshop (including **Zheng-Xin Yong** and 300+ authors) Preprint 2023
- [15] Multitask Prompted Training Enables Zero-Shot Task Generalization Victor Sanh*, ..., **Zheng-Xin Yong**, ..., Alexander M. Rush (41 authors) ICLR 2022 Spotlight.

SELECTED TALKS

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

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

Cohere For Al, 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, 2023)

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

SERVICES

Area Chair:

EMNLP 2023 (Multilingualism and Linguistic Diversity)

Conference/Workshop Reviewer:

COLM 2024 ARR 2021-Present 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)

MENTORING

Jacob Xiaochen Li (Sep 2023 - Present). Brown University.

Edward Ajayi (Jun 2023 - Nov 2023, Deep Learning Indaba). Now pursuing M.Sc. at CMU-Africa with fully-funded MasterCard Foundation Scholarship.

Imam Hasan Araf (Jan 2022 - May 2022, Brown Computer Science exploreCSR), Rowan University.

Shutaro Aoyama (Aug 2019 - Jan 2021, Minerva-Masason Mentoring Program), Gunma Kokusai Academy (High School). Now undergrad at Columbia University.