SIMRET ARAYA GEBREEGZIABHER

Ph.D. Candidate, University of Notre Dame, IN, USA

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RESEARCH INTEREST

Human Computer Interaction, Human-AI Collaboration, Human-in-the-Loop Machine Learning, Data Annotation

EDUCATION

Ph.D. in Computer Science   01/2022 - Present
University of Notre Dame   Notre Dame, USA
- Advisor: Prof. Toby Jia-Jun Li
- Committee Members: Dr. Elena Glassman, Dr. Diego Gomez-Zara, Dr. Nitesh Chawla
- **IBM PhD Fellow 2024/25**

Bachelor of Science in Software Engineering   10/2016 - 10/2021
Addis Ababa Institute of Technology   Addis Ababa, Ethiopia
- Major: Software Engineering
- Honor: Addis Ababa University 2021 Great Distinction

SELECTED PUBLICATIONS

[C.6] **Leveraging Variation Theory in Counterfactual Data Augmentation for Optimized Active Learning**
Simret Araya Gebreegziabher, Kuangshi Ai, Zheng Zhang, Elena L. Glassman, and Toby Jia-Jun Li
Findings of the 63rd Annual Meeting of the Association for Computational Linguistics (ACL Findings 2025)

[C.5] **MetricMate: An Interactive Tool for Generating Evaluation Criteria for LLM-as-a-Judge Workflow**
Simret Araya Gebreegziabher, Charles Chiang, Zichu Wang, Zahra Ashktorab, Michelle Brachman, Werner Geyer, Toby Jia-Jun Li, and Diego Gomez-Zara
Proceedings of the 4th Annual Symposium on Human-Computer Interaction for Work (CHIWORK 2025)

[C.4] **The Obvious Invisible Threat: LLM-Powered GUI Agents' Vulnerability to Fine-Print Injections**
Chaoran Chen, Zhiping Zhang, Bingcan Guo, Shang Ma, Ibrahim Khalilov, **Simret Araya Gebreegziabher**, Yanfang Ye, Ziang Xiao, Yaxing Yao, Tianshi Li, Toby Jia-Jun Li
arXiv:2504.11281

[C.3] **Supporting Co-Adaptive Machine Teaching through Human Concept Learning and Cognitive Theories**
Simret Araya Gebreegziabher, Yukun Yang, Elena L. Glassman, and Toby Jia-Jun Li
Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2025)
Best Paper Award

[C.2] **Comparing Criteria Development Across Domain Experts, Lay Users, and Models in Large Language Model Evaluation**
Annalisa Szymanski, **Simret Araya Gebreegziabher**, Oghenemaro Anuyah, Ronald A. Metoyer, and Toby Jia-Jun Li
arXiv:2410.02054

[C.1] **PaTAT: Human-AI Collaborative Qualitative Coding with Explainable Interactive Rule Synthesis**
Simret Araya Gebreegziabher*, Zheng Zhang*, Xiaohang Tang, Yihao Meng, Elena L. Glassman, and Toby Jia-Jun Li
Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2023)

LIGHTLY-REVIEWED PUBLICATIONS

[L.4] **MetricMate: An Interactive Tool for Generating Evaluation Criteria for LLM-as-a-Judge Workflow**
Simret Araya Gebreegziabher, Charles Chiang, Zichu Wang, Zahra Ashktorab, Michelle Brachman, Werner Geyer, Toby Jia-Jun Li, and Diego Gomez-Zara
IUI 2025 Workshop on Human-AI Co-Creation with Generative Models (HAI-GEN)

[L.3] **MOCHA: Model Optimization through Collaborative Human-AI Alignment**
Simret Gebreegziabher, Elena L. Glassman, and Toby Jia-Jun Li
Adjunct Proceedings of the 37th Annual ACM Symposium on User Interface Software and Technology (UIST 2024 Adjunct)

[L.2] **CoCo Matrix: Taxonomy of Cognitive Contributions in Co-writing with Intelligent Agents**
Ruyuan Wan, **Simret Gebreegziabher**, Toby Jia-Jun Li, and Karla Badillo-Urquiola
Extended Abstracts of the 16th ACM Conference on Creativity and Cognition (C&C 2024)

[L.1] **A Taxonomy for Human-LLM Interaction Modes: An Initial Exploration**
Jie Gao*, **Simret Gebreegziabher***, Kenny Choo, Toby Jia-Jun Li, Simon Perrault, Thomas Malone
Extended Abstracts of the 2024 ACM Conference on Human Factors in Computing Systems (CHI EA 2024)

WORK EXPERIENCE

AIML Research Intern 05/2025 - 08/2025
Apple

- Conducted a large-scale user research with Apple internal participants around LLM data annotation
- Devised a mixed methods approach by combining human factors and user research lens
- Presented results and actionable insights to senior directors and leadership

Research Scientist Intern 05/2023 - 11/2023
Meta - Reality Labs

- Worked on Human-LLM interaction methods to support data exploration in UX-research, and qualitative research
- Developed and deployed an interactive system that is being used as an internal research tool
- Wrote a manuscript and submitted to an HCI conference

Graduate Teaching Assistant 01/2022 - 01/2023
University of Notre Dame

- Worked as a teaching assistant to the courses Human-Computer Interaction and Computer Architecture. As a teaching assistant I held office hours, advised students and graded exams and papers.

Research Assistant 05/2020 - 02/2021
University of Michigan

- Worked as a research assistant at the University of Michigan with Professor Valeria Bertacco as my faculty advisor. I worked on computer architecture projects namely Composable Benchmarking and redesigning memory access for faster explainable-AI algorithms.

Teaching Assistant 05/2018 - 12/2018
Girls Can Code

- Coordinated and assisted in a program hosted by X-hub Addis that was working to help girls in high school get into tech before joining the university.

GRANTS & AWARDS

IBM PhD Fellowship	2024-2025
Notre Dame-IBM Tech Ethics Hackathon – Second Place	2024
Gary Marsden Travel Awards	2023
Delta Analytics Global Teaching Fellow	2021
GRIESHMA Research Scholar - Indian Institute of Technology-Chennai	2020
First place winner at Oracle's Back to school Ethiopia hackathon	2019
Certified IBM blockchain developer- Mastery Award	2018

LANGUAGES & SKILLS

Program Languages:	Python, Java, Javascript, SQL, Kotlin
UX Skills:	Qualitative Research, Experiment Design, User Study
Database:	MySql, NoSql, Oracle
Languages:	English – Fluent, Tigrigna – Native, Amharic – Native

SERVICES

ICLR Bi-align Workshop - Program Chair	2025
Graduate Society of Women Engineers – Social Chair	2024
ACM IUI 2025 – Social Co-chair	2024
Student Volunteer – NeurIPS 2020, FaCCT 2022, CHI2023, CHI2024	2020 - 2024
INSPIRE - Addis Ababa University - Partnership Outreach Chair	2019 - 2020
Student organizer for the first AI in Ethiopia Conference	2018