# Tadesse K. Bahiru

Houston, TX | tbahiru@central.uh.edu | LinkedIn | GitHub

## Summary

PhD student in Computer Science focused on Responsible and Ethical AI. Build and evaluate frameworks that audit datasets and codebases for fairness, privacy, quality, and reproducibility. Skilled in Python, ML, and clinical data compliance.

## Education

**Ph.D. in Computer Science** — Expected Dec 2028
*University of Houston, Houston, TX* — *GPA 3.67/4.0*

**M.Tech in Information Technology** — May 2018
*Parul University, Vadodara, India* — *GPA 8.29/10.0*

## Technical Skills

**Languages:** Python, R, SQL, PHP
**Frameworks:** PyTorch and TensorFlow
**Tools:** Git, Docker, AWS, Jupyter, VS Code

## Research Experience

**Research Assistant** — Sep 2024 – Present
*Computational Biomedicine Lab, University of Houston* — *Houston, TX*
*Community Responsive Algorithms for Social Accountability (CRASA)*

- Designed an LLM-assisted audit pipeline to evaluate AI codebases across reproducibility, transparency, documentation, privacy, and testing
- Built a rubric-based scoring framework that generated structured accountability reports
- Automated evaluation of 12+ open source repositories, reducing manual review time

*Consortium for Translational and Precision Health (CTPH)*

- Built the Data Subcard framework to audit clinical datasets for quality, fairness, privacy, and regulatory compliance
- Combined profiling with SHAP-based diagnostics to flag re-identification risk and disparities
- Applied LLMs with a RAG pipeline to audit IRB protocols, consent forms, and data use agreements for compliance

## Professional Experience

**Teaching Assistant** — Jan 2024 – Aug 2024
*Department of Computer Science, University of Houston* — *Houston, TX*

- Assisted courses including Software Design (COSC 6353) and Programming and Data Structures (COSC 2436)
- Supported 50+ students through group and individual guidance
- Led labs, held office hours, and graded exams and assignments

**Lecturer** — Sep 2019 – Dec 2023
*Department of Information Technology, Wollo University* — *Dessie, Ethiopia*

- Taught Introduction to AI, Database Systems, and Internet Programming
- Developed a curriculum and introduced hands-on projects
- Supervised senior projects and guided applied student research

## Selected Publications

- **Tadesse K. Bahiru** and Ioannis A. Kakadiaris, "Codecard: Leveraging LLMs to Evaluate AI Model Code Development with the System Card Framework," *14th International Conference on Model and Data Engineering (MEDI 2025)*, November 2–4, 2025; Cairo, Egypt. *(Accepted)*
- **Tadesse K. Bahiru**, Carlos R. Ordonez, and Ioannis A. Kakadiaris, "Dataset Scorecard: A Comprehensive Assessment of Data Quality, Fairness, Privacy, and Compliance," *IEEE*

*DSAA 2025*, Birmingham, UK, October 9–13, 2025. *(Accepted)*

- **Tadesse K. Bahiru**, Natnael T. Sinshaw, and Hailemariam M. Teshager, "Auditing and Mitigating Intersectional Bias in Gender Classification: A Data-Centric Approach," *ICT4DA 2025*, November 21–23, 2025; Bahir Dar, Ethiopia. *(Accepted)*
- Natnael T. Sinshaw and **Tadesse K. Bahiru**, "Blog Data Showdown: Machine Learning vs Neuro-Symbolic Models for Gender Classification," *ICT4DA 2025*, November 21–23, 2025; Bahir Dar, Ethiopia. *(Accepted)*
- **Tadesse K. Bahiru**, Haileleol Tibebu, and Ioannis A. Kakadiaris, "AI Data Development: A Scorecard for the System Card Framework," *ITAI 2025*, Haryana, India, January 24–25, 2025. (Accepted)
- **Tadesse K. Bahiru**, V. S. Manjula, Tadesse Birara Akele, Engdaw Ayalew Tesfaw, and Tadesse Destaw Belay, "Mining Road Traffic Accident Data for Prediction of Accident Severity," *IDCIoT 2023*, Bengaluru, India, January 5–7, 2023.
- Sileshi Bogale Haile, Tadesse Destaw Belay, and **Tadesse K. Bahiru**, "Deep Learning-Based Emotion Classification for Amharic Texts," *ICAST 2023*, Bahir Dar, Ethiopia, August 25–27, 2023.
- **Tadesse K. Bahiru**, Dheeraj Kumar Singh, and Engdaw Ayalew Tessfaw, "Comparative Study on Data Mining Classification Algorithms for Predicting Road Traffic Accident Severity," *ICICCT 2018*, Coimbatore, India, 2018.
- Engdaw A. Tessfaw, B. Ramani and **Tadesse K. Bahiru**, "Ethiopian Banknote Recognition and Fake Detection Using Support Vector Machine," *ICICCT 2018*, Coimbatore, India, 2018.