Hana Andargie Kassie

EDUCATION

Addis Ababa University, AAU, Bachelor of Electrical and Computer Engineering

Sept 2019 - June 2024

Research Interest: Specialization in HCI, Human-Robot Interaction Teaming, Trust Situational Awareness, and social media/Social Computing, user experience (UX)

PUBLICATION

Journal and Conference paper: Autonomy Acceptance Model (AAM): The Role of Autonomy and Risk in Security Robot Acceptance X. Ye, W. Jo, A. Ali, S. Bhatti, C. Esterwood,<u>H. Kassie</u>, and L. P. Robert Jr. Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction(March 2024) https://ieeexplore.ieee.org/document/10660878

EXPERIENCE

Computer Vision and Graphics Research Initiative 2024Dec 2024 - Jan 2025Project Title: Improving Video-Level Consistency in Novel View Synthesis(NVS)Addis Ababa and Cornell

- Research on NVS: Identified key inconsistencies in novel view synthesis for videos, focusing on complex scenes and occlusions.
- Consistency Evaluation: Developed methods to detect and reject inconsistent outputs in synthesized videos.
- Insights and Results: Analyzed errors like distortions, object disappearance, and artifacts to improve NVS models.

Poster Link

Addis Ababa Institute of Technology (AAiT) Project Title: Autonomous Human-Following Trolley with Deep Learning.

- Utilized a pre-trained TensorFlow Lite model for real-time object detection, specifically human figures, to guide the trolley's movement
- Developed path planning algorithms to optimize the navigation and operational efficiency of the autonomous trolley
- Integrated Raspberry Pi with sensors and motor controllers, leveraging Python libraries such as OpenCV, NumPy, and RPi.GPIO for system management and control

Paper Link

Undergraduate Research Intern at Michigan Autonomous Vehicle Research	May 2023 – Jan 2024
Intergroup Collaboration (MAVRIC), University of Michigan	Michigan, USA
Project Title: Human Autonomous Vehicle Interaction and Teaming	

- Conducted extensive simulations using Unreal Engine to replicate various weather conditions
- Investigated the impact of different weather scenarios on human interactions with autonomous vehicles
- Build a research question, decide on an approach to answering it, and with luck conduct early pilot testing
- Weekly paper review presentation

Poster Link | Internship Evaluation Grade

Minnovation

Hardware Engineer Intern (Remote)

• Developed innovative street camera systems capable of accurately counting the number of cars within a specified timeframe, contributing to the prediction of traffic jams.

May 2023 - Oct 2023

Feb 2024 - June 2024

Addis Ababa, Ethiopia

- Spearheaded the implementation of vision-based human detection using deep learning techniques, successfully training a model to detect humans in real-time data captured by cameras.
- Participated in the 27th Minnovation project competition, showcasing expertise in hardware engineering and innovative problem-solving.

Leanbitseth

Full stack Intern

- Full stack developer
- Took the initiative to lead the backend team for a week when no team lead was available

Ethio Robo RoboticsJul 2021 - Dec 2021Assistant InternAddis Ababa, Ethiopia• Taught programming and math courses to primary school students

- laught programming and math courses to primary school studes
- Designed engaging, hands-on lessons to enhance learning

Technical Skills

Languages: Python, C, C++, PHP, JavaScript(NodeJS, ReactJS, ExpressJS), HTML5, CSS, Bootstrap, MATLAB, SQL

OS environments: Linux, Windows, ROS

Tools: GitHub, Notion, Overleaf

Software: Unreal Engine 5, Unity, Blueprint, LT spice

Honors and Awards

SIGAI Travel Award, 20th Annual ACM/IEEE International Conference on Human-Robot Interaction. Awarded in 2025(Grant Letter)

• Received a travel award for attendance at the prestigious 20th Annual ACM/IEEE International Conference on Human-Robot Interaction (HRI) in Melbourne, recognizing contributions to sustainability and under-represented demographics in robotics research.

ACM-W Scholarship, 19th Annual ACM/IEEE International Conference on Human-Robot Interaction. Awarded in 2024

• Received a scholarship for attendance at the prestigious 19th Annual ACM/IEEE International Conference on Human-Robot Interaction(HRI)

2023 Africa Undergraduate Research Adventure (AURA 2023 STUDENTS)

• Awarded for the best application for an undergraduate research assistant at the University of Michigan

2023 Automate Show Automate Show International Student

• Awarded to attend the Automate show in Detroit as an international student

Extracurricular activities

Enderase Youth Association Leadership and Diplomacy Program (LEAD) - Enderase Youth Association

- Actively participating in the ongoing LEAD program, engaging in various initiatives and projects to foster leadership and diplomacy skills
- Contributing to the program's mission by participating in community engagement, attending events

Women's Association Leader (Community Outreach for Girls' Education)

- Led initiatives over two years to support at-risk girls in my hometown, partnering with local authorities to counter early arranged marriages that threatened their education
- Escalated severe cases to legal authorities, helping 200 girls stay in school

Student Council Member (Addis Ababa Institute of Technology)

Mar 2022 - Dec 2022 Addis Ababa, Ethiopia • Played an active role in organizing university events and enhancing the quality of education and student life, contributing to a positive university environment and community

Debre Work student on Covid Prevention Awareness Creator

- Voluntary activity to create awareness about the diseases by taking a slogan, Act against the COVID-19
- Engaged to support of the teaching staff of Debre Work Primary School at the time of the pandemic to cover the courses for students who were taking regional exams that year

Debre work Secondary and Preparatory School Summer Tutor

• General Physics and Mathematics tutor

Languages

English: Full Professional Proficiency

Amharic: Native Geez: Elementary Proficiency