



Seid Hassen Yesuf

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ABOUT ME

My research interests lie at the intersection of **Computer Vision**, **Natural Language Processing (NLP)**, and **Satellite Networks**, with a strong focus on applying **Artificial Intelligence (AI)** to solve complex, real-world problems. In **Computer Vision**, I am particularly interested in leveraging deep learning techniques to enable automated image analysis for medical imaging applications. In **Natural Language Processing**, I explore advanced language models to address challenges in text analysis, sentiment detection, and abusive language detection, with a particular focus on underrepresented language like Amharic. Additionally, my research interest in **Satellite Networks**, where I want to investigate the integration of AI for optimizing satellite communication, data transmission, and global connectivity. By combining these domains, I aim to develop innovative solutions that improve both terrestrial and satellite-based systems, advancing the fields of communication and data processing.

My project interests focus on the development of **web-based** and **mobile-based applications** using **Python** and **JavaScript**. I am passionate about creating scalable and efficient applications that provide seamless user experiences across platforms. In web development, I utilize frameworks such as **Django** (Python) and **Laravel** (PHP) alongside **React** and **Node.js** (JavaScript) to build robust, full-stack solutions. For mobile development, I leverage cross-platform frameworks like **Flutter** and **React Native** to develop intuitive and high-performance mobile apps. By combining the strengths of Python for backend development and JavaScript for dynamic, interactive frontend experiences, I aim to deliver innovative applications that meet both user needs and industry standards.

WORK EXPERIENCE

SEP 2017 – CURRENT Gondar, Ethiopia

SENIOR LECTURER, DEPARTMENT OF COMPUTER SCIENCE UNIVERSITY OF GONDAR

Courses I taught: Internet Programming using PHP and JavaScript, Compiler Design, Computer Graphics, Data Structure and Programming, Computer Vision and Image Processing, and Machine Learning

Research and Project I Conducted: Multimodal Amharic abusive language detections on social media using deep learning approach

SEP 2010 – SEP 2017 Dessie, Ethiopia

LECTURER, DEPARTMENT OF COMPUTER SCIENCE WOLLO UNIVERSITY

Courses I taught: Computer Programming using C++, Advanced Programming using Java, Data Structure and Algorithms, Compiler Design, Internet Programming using PHP and JavaScript

Research I Conducted: Breast Cancer Detection Using Machine Learning Techniques

JAN 2021 – JAN 2023 Christiansted, Virgin Islands, United States

ICT PROJECT MANAGER-REMOTE JOB KOINON TECHNOLOGY SERVICES, INC.

Tasks: Manages and Develops web-based IT projects to ensure adherence to budget, schedule, and scope of project. Programming Languages I have used: PHP (Laravel and ReactJS frameworks for backend and frontend development)

● EDUCATION AND TRAINING

OCT 2007 – JUL 2010 Gondar, Ethiopia

B.SC. IN COMPUTER SCIENCE University of Gondar

Graduation project: Students information management system for university of Gondar

OCT 2012 – JUL 2015 Addis Ababa, Ethiopia

M.SC. IN COMPUTER SCIENCE Addis Ababa University

Thesis title: Amharic Word Sense Disambiguation using Wordnet

● PUBLICATIONS

Journals Articles

[1] **Y. S. Hassen**. Breast cancer detection using machine learning techniques. *International journal of Computer Science*, **2019**, 10, 27–33

[2] Barani Sundaram, B., Kedir, T., Mishra, M. K., **Y. S. Hassen**, Tiwari, S. M., & Karthika, P. Security analysis for Sybil attack in sensor network using compare and match-position verification method. In *Mobile Computing and Sustainable Informatics: Proceedings of ICMCSI 2021* (pp. 55-64). Springer Singapore.

[3] Gupta, S.K.; **Y. S. Hassen**; Nain, N. Real-Time Gender Recognition for Juvenile and Adult Faces. *Comput. Intell. Neurosci.* **2022**, 1503188.

[4] Padhi D.K., Padhy N., Bhoi A.K., Shafi J., **Y. S. Hassen**. An intelligent fusion model with portfolio selection and machine learning for stock market prediction *Comput. Intell. Neurosci.*, 2022 (2022)

Conference Proceedings

[1] **Y. S. Hassen**, Shumet Tadesse, Abebe Mulu, Kibret Zewdu, Mengistu Belete, Multimodal Amharic Abusive Language Detection on Social media using Deep Learning Techniques, The Neural Information Processing Systems Conference(2024), Vancouver, Canada

[2] **Y. S. Hassen**, Yaregal Assabie , Amharic word sense disambiguation using WordNet, International Conference on Advanced Science and Technology , Bahir Dar University, Bahir Dar, Ethiopia, 2017.

● PROJECTS

Researches and Projects Grants and Participations

1. Justice Information Management System for Central Gondar Zone as Co-Investigator(Co-PI)

Tasks: I have conducted system analysis using Agile Scrum software methodologies

2. Research and Project Information Management System for University of Gondar as Principal Investigator (PI)

Tasks: I have conducted system analysis using Agile Scrum software methodologies and performed system testing for the project.

3. Multimodal Amharic Abusive Language Detection language Detection using Machine Learning Techniques

Tasks: Develop the model using Pre-trained CNN models such as ResNet-50, VGG19, and Inception-V3 were utilized for extracting image features, while fine-tuned BERT was employed for extracting text features in detecting abusive language across multiple modalities in Amharic

4. Exploring the Management of Cybersecurity Risks in the Context of Ethiopia: insights from public Sector Institutions as Co-Investigator(Co-PI)

Tasks: Data collection, analysis, and preprocessing involve gathering relevant datasets, cleaning and transforming the data, and preparing it for use in research models to ensure accurate and meaningful results.

5. A data driven customer segmentation and profiling for mobile phone users based on usage behavior: The case of Ethio-telecom as Co-Investigator(Co-PI)

Tasks: Data collection, analysis, and preprocessing involve gathering relevant datasets, cleaning and transforming the data, and preparing it for use in research models to ensure accurate and meaningful results.

6. Student Academic Performance Prediction Towards a Smart Education Based on Machine Learning Approach: In the Case of Higher Education Institutions in Ethiopia as Co-Investigator(Co-PI)

Tasks: Data collection, analysis, and preprocessing involve gathering relevant datasets, cleaning and transforming the data, and preparing it for use in research models to ensure accurate and meaningful results.

● HONOURS AND AWARDS

Academic Scholarships Awards

1. Postgraduate Study Scholarship Award for M.S Study Awarded by Addis Ababa University, Addis Ababa, Ethiopia.
2. Regular Scholarship Award for Undergraduate Study Awarded by Ministry of Education, Addis Ababa, Ethiopia.

● LEADERSHIP EXPERIENCES

NOV 2018 – MAR 2022

Head, Department of Computer Science at University of Gondar

- Direct the department's teaching, research, and community service activities, assign academic advisors, and foster a supportive environment for growth in all initiatives.

JUN 2016 – SEP 2017

Coordinator, Research, Community Service and Postgraduate at Wollo University

- Coordinate researches, projects and community service initiatives, manage the Computer Networking and Communications postgraduate program, organize community training sessions, and arrange seminars for staff and students.

● COMPUTER SKILLS

Back-end Languages: Python, Java and PHP

Front-end Languages: HTML, CSS and JavaScript

Machine Learning Tools: Tensorflow and Pytorch

Frameworks: Laravel, Django, Flutter, Spring Boot and ReactJS

Full Stack :MERN (MongoDB, Express, React, and Node. js)

Data Visualization Tools: Tableau, Power BI and Matplotlib

Operating Systems: Linux, Windows

● RECOMMENDATIONS

Dr. Mohammed Seid Abegaz

Email:mamsied2002@gmail.com

Postdoctoral Research Fellow, College of Science and Engineering, HBKU

Dr. Birhanu Hailu Belay

Email:birhanu.hailub@gmail.com

Scientist-I at [University of Alabama at Birmingham](#)

Dr. Demeke Shumeye Lakew

Email:sistalem@gmail.com

Asst. professor of Computer Science at Wollo University

Dr. Yaregal Assabie Lake

Email:yaregal.Assabie@aau.edu.et

Associate professor of Computer Science at Addis Ababa University

● LANGUAGE SKILLS

Mother tongue(s): **AMHARIC**

Other language(s): **ENGLISH: FLUENT** | **ARABIC: BEGINNER**