



Garamu Tilahun Iticha

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Place of birth: AMURU, Ethiopia | **Nationality:** Ethiopian | **Gender:** Male | **Phone number:**

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ABOUT ME

I am Garamu Tilahun Iticha, a dedicated Software Engineer and educator currently working as a Researcher in Space Technology, specializing in satellite operation and aerospace engineering. With a Master's degree in Software Engineering and a Bachelor's degree in Information Technology, I have a solid foundation in both theoretical concepts and practical skills.

My expertise spans multiple programming languages, including C, C++, Python, Java, PHP, and React. I have successfully conducted workshops and lectures at Debre Markos University, where I mentored students in advanced programming, database design, and artificial intelligence.

In my research role, I focus on leveraging technology to address challenges in aerospace engineering and satellite operations. My interests include data mining, machine learning, and cloud computing, and I have several publications in reputable journals.

I possess strong leadership and communication skills, having led teams in academic settings and research initiatives. I thrive in collaborative environments and am committed to fostering a culture of innovation and skill development among students and peers.

WORK EXPERIENCE

 **DEBRE MARKOS UNIVERSITY** – DEBRE MARKOS, ETHIOPIA

RESEARCHER – 07/08/2020 – CURRENT

Researcher and Satellite Operator

Space Science and Geospatial Institute

November 2024 - Present

- Conducting research in satellite operation and aerospace engineering, focusing on innovative applications of space technology.
- Managing satellite operations, ensuring optimal performance and data acquisition.
- Collaborating with multidisciplinary teams to enhance satellite functionality and data utilization.
- Engaging in community outreach and educational initiatives related to space science.

Lecturer

Institute of Technology, School of Computing, Software Engineering Academic Program, Debre Markos University

August 2012 - October 2024

- Delivered lectures and workshops on programming languages, including C/C++, Python, Java, PHP, and web development frameworks.
- Mentored students in practical coding skills through hands-on projects and guided them in their academic pursuits.
- Taught advanced courses in Programming, Internet Programming, Database Design, Network Design, Multimedia Systems, Mobile Programming, and Artificial Intelligence.
- Developed course materials that bridge theoretical knowledge with practical applications essential for aspiring software engineers.

EDUCATION AND TRAINING

19/11/2014 – 21/04/2016 Adama, Ethiopia

MASTER'S OF SCIENCE Adama Science and Technology

Website www.aastu.edu.et | **Field of study** Information and Communication Technologies (ICTs) not further defined

Website www.ju.edu.et | **Field of study** Information and Communication Technologies (ICTs) not further defined , Computer use

16/05/2025 – 12/06/2025 Beijing, China
TRAINING COURSE ON SATELLITE TECHNOLOGY FOR ETHIOPIA Academy for International Business Officials (AIBO), MOFCOM

12/08/2025 – 14/08/2025 Istanbul, Türkiye
GENERATIVE AI FOR GOVERNMENT LEADERSHIP TRAINING ETHIOPIA ISTANBUL INTERNATIONAL CENTER FOR PRIVATE SECTOR IN DEVELOPMENT

05/06/2016 – 30/09/2016 Adama, Ethiopia
CCNA ROUTING AND SWITCHING Adama Science and Technology University

07/04/2025 – 21/05/2025
PYTHON PROFESSIONAL TRAINING, FULL STACK WEB DEVELOPMENT AND MACHINE LEARNING Space Science and Geospatial Institute, Adama Science and Technology Institute

10/10/2017 – 30/06/2018
HIGHER DIPLOMA IN TEACHER EDUCATION Debre Markos University

Field of study Teacher training without subject specialisation

● **LANGUAGE SKILLS**

Mother tongue(s): **AFAN OROMO** | **AMHARIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **CONFERENCES AND SEMINARS**

01/06/2019 – 02/06/2019
1st National Conference on Advancements of Science and Technology for Sustainable Development

The paper titled "**Selective Testing as a Service for Cloud Computing**" explores the significant challenges users face when selecting cloud services, particularly regarding performance evaluation before deploying applications. The study introduces a novel approach to cloud performance testing through selective testing, which allows users to assess the performance status and capacity of cloud servers before committing their data and applications. The research employs a local cloud deployment using OpenStack and utilizes Java programming for algorithm development. Key performance indicators such as throughput, response time, and latency are evaluated, demonstrating that the local cloud outperforms established providers like Amazon EC2 and Windows Azure in certain metrics. The findings emphasize the importance of selective testing as a tool for users, enterprises, and IT specialists to make informed decisions based on their specific requirements. This work contributes to the growing field of cloud computing by providing a framework for testing and evaluating cloud service performance, thereby enhancing user confidence in cloud deployment.

● **PROJECTS**

High-Performance Game Engine

Write here the description...Developed a game engine in C++ that supports real-time rendering and physics simulation, enabling immersive gaming experiences.

IoT Device Firmware

Created firmware for an IoT device using C, ensuring low power consumption and efficient data transmission.

E-commerce Platform

Developed a full-stack e-commerce application using PHP and React, integrating payment gateways and user authentication.

Data Analytics Dashboard

Built a data analytics dashboard using Python and ASP.NET, allowing users to visualize and analyze large datasets.

Cloud-Based Agro-Information System

Developed a cloud-based agro-information system for Ethiopia using Java, facilitating access to agricultural data and resources.

Jimma University Library Management System

Implemented a library management system using PHP, enhancing the efficiency of library operations.

Debre Markos University Student Information Management System

Developed a student information management system using Java, streamlining administrative tasks and student data management.

Community-Based Research Projects

Engaged in various community-based research initiatives, including:

- **Mobile-Based Assessment and Monitoring to Improve Prevention of Coronavirus Pandemic**
- **Integrated Knowledge-Based System with Machine Learning to Advise on Kidney Disease**

Art Appreciation

Passionate about visiting modern art galleries to explore and appreciate contemporary art.

● HOBBIES AND INTERESTS

Creative Writing

Enjoy creating poetry and other forms of written expression.

Tavel

Interested in experiencing different cultures and environments through travel.

Music

Enjoy playing the guitar, which serves as a creative outlet and relaxation activity.

● PUBLICATIONS

2019 Integrated Data Mining and Knowledge Based System to Predict and Advise on Diabetes

Abstract

Diabetes mellitus (DM) is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action or both, it is divided into two major types type1 and type2 diabetes, however during the past decade, diabetes mellitus has emerged as an important clinical and public health problem throughout the world, especially in developing country like Ethiopia, due to this problem diabetes dieses can be controlled by two mechanisms such as non-drug-therapy and drug-therapy. Data Mining is the machine learning wich predicts or extracts unseen knowledge contained in large databases, data mining classifiers are the algorithms which classify the inputted data to the correct class it belongs, for this study j48 tree is used in order to generate strong rules from the inputted diabetes data set, Knowledge base system is a branch of artificial intelligence which gives advices and treatments for diabetes patients. The integrated data mining results and knowledge base system for diabetes prediction and treatment is the system which integrates the result of data mining predicted types of diabetes and gives

advice by knowledge based system; the integration process is through jpl library which calls j48 rules from weka that embedded in java. Finally the system performance and user acceptance is performed on the developed system by domain experts based on the prepared test cases and interview processed, the system score or registered 91.156% overall average from the users.

Authors: Tesfaye Fufa, Garamu Tilahun | **Journal Name:** Journal Article | **Volume, Issue and Pages:** Volume: 6, Issue: 10 | **Publisher:** International Journal of Advanced Studies in Computer Science & Engineering

2019

Selective Testing As A Service for Cloud Computing

Abstract: Now a day's cloud computing has become an integral part of people's lives to acquire services such as software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS). Users get services by deploying their data and application on remote servers. However, knowing the real information about a cloud performance before subscribing data and application is great challenge for the users. The objective of this study is to give selective testing and to investigate cloud performance status and capacity of servers. Finding the parameters helps us to measure the actual performance of a cloud computing on some specific data and application. These parameters will help users, enterprises, developers and IT specialists to measure cloud performance based on their requirements and needs. In order to fulfill the objective of this study, an experiment and implementation have been done in the lab test environment. Java programming language was used for changing the algorithm as one method. The study is unique from others we used Local cloud deployment method using open source cloud OpenStack to conduct real test and Applications Manager tool used for testing services of Amazon EC2. In the experiment, performance parameters (Throughput, response time and latency) including cost were tested and analyzed; and we found that throughput of local cloud is higher than EC2 and Windows Azure and Medium response time and lower cost as result tested in laboratory, and the future direction should be optimizing performance when you come with performance difference with cloud providers by assigning the same computing resource.

Garamu Tilahun Itichaa1*, Tesfaye Fufa Gedefa

Journal Name: IOSR Journal of Computer Engineering | **Volume, Issue and Pages:** Volume: 21 Issue No. : 3 | **Publisher:** International Organization of Scientific Research

2023

Empowering Scientific Computing and Data Manipulation With Numerical Python (NumPy)

NumPy is a Python library for performing numerical data structures and specialized computing. It improves the components of N-dimensional arrays and provides operations and tools to interface with these arrays. NumPy implements the N-dimensional array, or ndarray, and provides Python-specific scientific methods for performing realistic array and matrix operations. When compared to array programming in other languages, it will allow us to do a wide range of mathematical operations and data manipulations. NumPy can be used with other Python packages and programming languages such as C and C++. NumPy now supports object-oriented programming as well. For example, a class called ndarray may be an N-dimensional array with multiple ways of performing various data structure operations and characteristics.

Authors: Garamu Tilahun Iticha, Tesfaye Fufa Gedefa and Galety Mohammed Gouse | **Journal Name:** Book Chapter | **Publisher:** IGI Global

● SOCIAL AND POLITICAL ACTIVITIES

Ethiopia

Prosperity Party

As a member of the Prosperity Party, I am dedicated to contributing to Ethiopia's development and fostering unity among its diverse communities. In addition to promoting sustainable economic growth, I actively engage in discussions related to national security, advocating for measures that enhance safety and stability. My involvement reflects my commitment to building a prosperous and secure future for all Ethiopians. Together with fellow members, I strive to implement policies that uplift, empower, and ensure the safety of our citizens.

● PROOF OF EMPLOYMENT

Proof of Employment

This is to certify that Mr. Garamu Tilahun Iticha is an employee at the Space Science and Geospatial Institute (SSGI) in Addis Ababa. He has been involved in various projects and operations since his employment commenced on June 26, 2025, and is currently engaged in the position of Associate Researcher II.

● **RECOMMENDATIONS**

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