

BINIYAM LOMBE

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Education

University of Bristol

BEng in Electrical and Electronic Engineering

Sep 2019 – Jul 2022

Bristol, United Kingdom

Relevant Coursework

- Digital Systems
- Networking Protocols
- Communications
- Systems Engineering
- Computer Programming
- Introduction to AI
- Engineering Mathematics
- Real-Time Systems

Experience

University of The West of England Bristol's International College

Jan 2023 -Present

Lecturer

Bristol, United Kingdom

- Teach Electrical & Electronic Principles and Introduction to Computer Programming in Python.
- Taught Intermediate Mathematics and Fluid Mechanics in 2022/23 academic year & worked as a module coordinator for both subjects.
- Contribute to curriculum development, exam preparation, assessment marking, and supervision of all cohorts in electronics laboratories.
- Personal tutor for 16 students and provide comprehensive assistance throughout the academic year.

AddisCoder, Inc

Jul 2023 – Aug 2023

Introduction to Programming and Algorithms Teaching Assistant

Addis Ababa, Ethiopia

- Worked as a volunteer Teaching Assistant (TA) to support 100 outstanding high school students from all over Ethiopia.
- Facilitated student progress, designed problem sheets, and delivered simplified programming mini-lectures to enhance their learning experience.

Addis Ababa University

Jun 2021 – Aug 2021

Electrical and Computer Engineering Teaching Assistant

Addis Ababa, Ethiopia

- Planned and delivered Circuit Theory and Electronics tutorial sessions for Biomedical Engineering students.
- Worked as laboratory assistance, organised office hours and 1-to-1 consultation for students with special needs.

Projects

Research Project: Design & Investigation of a DC-DC Boost Converter |*Matlab, Python*

Oct 2021- May 2022

- Simulated and designed a 12V to 24V DC-DC Boost Converter with 80% efficiency for a Solar Photovoltaic Application.
- Investigated, characterised, and tested the impact of light intensity, angle of sunlight arrival, and temperature of the performance of solar photovoltaic.
- Analysed collected sunlight intensity, angle of sunlight arrival, and temperate data to identify the optimum position to receive maximum power output.

Antenna Design Project | *Satellite Antenna*

Mar 2022

- Designed a satellite antenna and gained the ability to effectively select Low Noise Amplifiers (LNA) by using specifications provided to meet design requirements.
- Performed complex mathematical calculations to determine the size of the satellite antenna.

Self-driving Robot | *C for Embedded Systems*

Nov 2021

- Programmed ARM 32-bit Cortex-M4F Microcontroller based robot that responds to interrupts using C for Embedded Systems.

Peak Detector | *VHDL*

Apr 2021

- Designed a peak detector in VHDL that can successfully be prototype on FPGA.
- The developed peak detector communicates with a data source that provides bytes upon request, and that identifies and stores bytes with the highest value and its adjacent bytes in the sequence of the retrieved data.

Goertzel Algorithm Implementation | *C, Code Composer Studio*

March 2021

- Led group of three members and successfully designed Goertzel Algorithm in C to detect single and multiple frequency input signals.

Bus Simulation Model | *Python, Matplotlib*

Mar 2020

- Implemented and investigated bus simulation computer code in pairs by effectively using GitHub.
- Improved the simulation model by adding features like passenger waiting time, different bus routes, and cost structure.

Technical Skills

Languages: Python, Embedded C, Matlab, HTML/CSS, Latex

Developer Tools: VS Code, Code Composer Studio, NI MultiSim, ModelSim

Technologies/Frameworks: Linux, GitHub, Bit-bucket, Microsoft Visio

Leadership / Extracurricular

Albert Tutorial and Volunteer Centre (ATVC)

Sep 2012 – Present

Founder and Managing Director

- The organisation offers free teaching services to disadvantaged students & has impacted over 300 students per year since 2012 using a network of more than 55 volunteer teachers.
- Fund raised & donated school materials each year for more than 40 students from low-income families since 2015.

Bristol University Student Radio Station

Feb 2019 – Mar 2020

Burst Radio Show Host

- Hosted 'Sounds of Africa' music show to promote the cultural heritage of African countries through music and inviting various guest experts from around the world to the show.

Awards / Scholarships

- Won ideation stage funding to work on a start-up idea from the University of Bristol.
- Awarded FACE Pius Adesanmi Memorial Student Award for Outstanding Pan-Africanism from the University of Bristol.
- Awarded Ashinaga Africa Initiative Fully Funded Scholarship for my undergraduate studies, selected among 200 applicants in Ethiopia.
- Awarded Bristol PLUS Award for demonstrating evidence of significant professional development through work experience and various extracurricular activities.