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*Profile will be available until 28 June 2026*

# Solomon Ferede Ezez

An experienced Electrical and Computer Engineering lecturer at Wolaita Sodo University with a strong academic foundation and industry expertise. I hold a BSc in Electrical and Computer Engineering and an MSc in Control Systems Engineering. My professional background includes hands-on experience in Ethiopia's electric power generation sector, enhancing the practical relevance of my teaching. Additionally, I am a certified software engineer from ALX, where I developed strong programming skills in Python and C, further showcasing my commitment to continuous learning and technical excellence. My combined engineering, programming, and software development expertise positions me as a versatile contributor to academia and industry.

**Passport:** EP7619777 | **Date of birth:** 23/06/1994

**Place of birth:** Wolaita Sodo | **Nationality**: Ethiopian

**Hide contact details** ⌃

📞 **Mobile:** (+251) 917883737

✉ **Email address:** solomon.ferede@wsu.edu.et / ✉ **Email address:** ezezsolomonferede@gmail.com / ✉ **Email address:** solomon.ferede@eep.com.et

🌐 **Website:** solomonferede.ethiodigital.com.et

in **LinkedIn:** solomonferede / 👤 **Other:** solomonferede / f **Facebook:** solomonferede

📍 **Work:** Wadu, None Wolaita Sodo, Ethiopia

# WORK EXPERIENCE

● Wolaita Sodo University  |  📍 Wolaita Sodo, Ethiopia

## Lecturer in electrical and computer engineering        08/2022 – Current

- Designed, planned, and taught lectures based on curriculum requirements and exams.
- Collaborated with academic colleagues to develop new courses, incorporate curriculum changes, and develop research activities.
- Conducted individual and collaborative research projects to produce and publish articles in peer-reviewed journals.
- Participated in outreach activities undertaken by the department and school to promote and develop links with industry and community partners.

● Ethiopian Electric Power  |  📍 Addis Ababa, Ethiopia

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Business or sector: **Professional, scientific and technical activities**

## Website expert (Mostly Remote)        01/2024 – Current

- Website Development – Create and maintain websites using HTML, CSS, JavaScript, and more.
- Content Management – Update and oversee website content.
- UX/UI Design – Ensure a user-friendly interface and experience.
- Performance Monitoring – Measure speed, traffic, and engagement.
- Security Maintenance – Safeguard against cyber threats.
- Responsive Design – Guarantee mobile and cross-device compatibility.
- Analytics & Reporting – Utilize tools like Google Analytics for insights.
- Technical Support – Diagnose and resolve website issues.
- Collaboration – Partner with designers, developers, and content creators.

● Wolaita Sodo University  |  📍 Wolaita Sodo, Ethiopia

## Assistant lecturer in university

11/2018 – 11/2019

- Preparing and delivering lectures
- Assisting in grading and assessments
- Supporting students through mentoring and academic guidance
- Conducting research and preparing publications
- Participating in departmental meetings and activities

Ethiopian Electric Power  |  ⦿ Addis Ababa, Ethiopia

## Junior Electrical engineer (Temporary Role During the COVID-19 Period))

10/2020 – 09/2021

- Designed, planned, and developed controllers.
- Conducted system analysis to ensure the safety and reliability of electrical transmission, substations, and distribution lines.
- Determined the appropriate types and arrangements of circuits, insulation, and circuit breakers in electrical systems.
- Tested equipment, machinery, and instruments to verify proper functionality.

AidRigs, Remote  |  ⦿ United States

## Database Assistant                    28/09/2024 – 20/11/2024

- Database Structuring & Setup: Design and establish the initial database structure.
- Data Population: Enter and organize spare parts information within the database.
- Testing & Validation: Perform initial testing of database reports, user experience, and structure.
- SQL Querying: SQL queries are used for data retrieval and management.
- Parts Research & Reconciliation: Verify and cross-reference spare parts information with physical and online sources.
- System Evaluation: Evaluate and recommend the most suitable database system for long-term use.
- Integration Support: Ensure compatibility with tools such as AirTable, Asana, Slack, Trengo, and Google Workspace.
- Price Calculation: Help compute spare parts pricing, taking into account freight, customs, and tax factors.
- Historical Data Management: Keep records of past quotes, pricing, and transactions.

- Report Generation: Create structured reports for management and operational purposes.

● Wolaita Sodo University  |  ◉ Wolaita Sodo, Ethiopia

## Database Administrator II                    08/12/2018 – 01/2021

- Developed, maintained, and optimized databases using **SQL, Python, and Java**.
- Implemented data security measures including **encryption, authentication, access control, and regular backups** to safeguard against unauthorized access and breaches.
- Collaborated with cross-functional IT teams, provided user training and technical support, and documented database procedures and operational workflows.
- Prepared and presented database performance reports, analysis results, and system improvement recommendations.

# EDUCATION AND TRAINING

## ● Bahir Dar University                    10/2019 – 08/2022

Master Of Science Degree in Control System Engineering  |

◉ Bahir Dar, Ethiopia

- **Main Courses (Score)** - *Engineering Optimization(A+), Computer Controlled Electrical Drives(B+), Digital Control System(B+), Modeling and simulation of dynamic systems, linear system theory(A), Optimal control system(B) Nonlinear control system(B+), Intelligent control system(A-), System identification and adaptive control(B-), Multivariable and robust control(B)*

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https://www.bdu.edu.et/

Level in EQF: **EQF level 7**

Thesis: Self Tunning Fuzzy-PID controller for Position Control of Two-Degree of Freedom Pneumatic Artificial Muscle Manipulator

## ● Hawassa University                    09/2013 – 06/2018

Bachelor of Science degree in Electrical and Computer Engineering  │

📍 Hawassa, Ethiopia

- **Main Courses** - *Fundamentals of Electrical Engineering (A+), Introduction to Computing(A+), Electrical Machines (A),* Electrical Workshop Practice I(A-), *Introduction to Control Systems(A-), Introduction to Power Systems(A+), Modern Control Systems(A-), Digital Signal Processing(A-), Embedded Systems(A+), Power Electronics and Electrical Drives(B+), Industrial Automation and Introduction to Robotics(C),* Neural Networks and Fuzzy Logic Control(A), Applied Modern Physics(A), Engineering Thermodynamics(A-), Electromagnetic Fields(A)*.*

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[www.hu.edu.et](www.hu.edu.et)

Final grade: **3.76**  │  Level in EQF: **EQF level 6**

Thesis: Design and Simulation of Vending Machine

## ALX Africa                                                        07/2023 – Current

Certificate in Software Engineering(Online)  │  📍 Nairobi, Kenya

Data structure and algorithm, Higher level programming(Python, C, JavaScript), Database managements

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[www.alxafrica.com](www.alxafrica.com)

Level in EQF: **EQF level 5**

## ALX Africa                                                  01/07/2025 – 30/09/2025

ALX Professional Foundations (3-Month Program)  │  📍 Nairobi, Kenya

- Digital literacy and use of essential digital tools
- Communication and interpersonal skills
- Teamwork and collaboration
- Professional workplace behavior and ethics
- Problem-solving and critical thinking
- Time management and productivity skills
- Remote-work readiness and virtual collaboration
- Leadership fundamentals
- Personal branding and career development skills

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[www.alxafrica.com](www.alxafrica.com)

## ● ALX Africa                                          08/2022 – 10/2022

ALX Virtual Assistant    |    ● Nairobi, Kenya

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[www.alxafrica.com](www.alxafrica.com)

## ● ALX Africa                                    20/08/2025 – 24/09/2025

AI for Developers II

- Advanced prompt engineering
- AI automation and workflow optimization
- Integrating AI into web and software applications
- Building intelligent tools using modern AI APIs
- Applied machine learning concepts for developers

# LANGUAGE SKILLS

## Mother tongue(s)

**Amharic**

## Other language(s)

|  | Listening | Reading | Spoken interaction | Spoken production | Writing |
|---|---|---|---|---|---|
| **English** | **C1**: Proficient user | **C2**: Proficient user | **C1**: Proficient user | **C1**: Proficient user | **C1**: Proficient user |

# SKILLS

Digital Control System | Embedded Systems | Python | Matlab/Simulik

Rehabilitation Robotics | Sensor & Actuator Integration |

Neural Network and Deep Learning |

Design and management of a relational Database | Fuzzy Logic Control |

Control Systems Engineering | Machine Learning | System Modeling & Simulation |

Analytical Problem Solving | Team management tools (Asana, Trello) |

Good Communication and Writing Skills | C and C++ programming
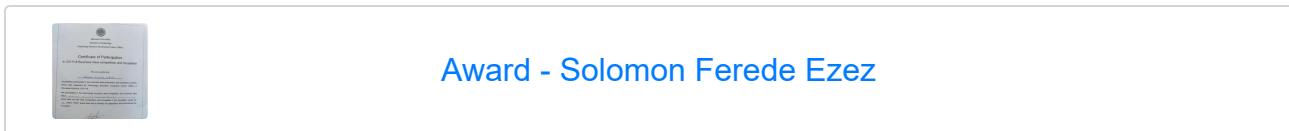
# HONOURS AND AWARDS

## Certificate of Participation in the 2017/18 Business Idea Competition and Incubation

2018

Hawassa University, Technology Business Incubation Center (TBIC)

I successfully participated in the business idea competition and incubation process at Hawassa University in 2017/18. I presented a business idea titled 'Automatic Groundnut Hatching Machine,' which won the competition and was incubated at the center for one year, demonstrating my dedication and commitment to innovation.

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Award - Solomon Ferede Ezez

## Certificate of Participation - YEEP International Exposure Week 02/2018

Young Entrepreneur Exchange Project (YEEP)

Recognized for successfully participating in the YEEP International Exposure Week held from February 4–10, 2018, in Hawassa, Ethiopia. This program brought together Ethiopian students and Swiss experts to improve and transform business ideas into feasible ventures through coaching sessions on various technical and entrepreneurial topics.

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Award Cereteficate - Solomon Ferede Ezez

# PROJECTS

## Automatic Home Appliance Control Using Microcontroller

01/2017 – 06/2017

- Designed and implemented a system to control room light intensity based on occupancy using a **PIC microcontroller**.
- Utilized IR sensors to detect entry and exit of persons, triggering the microcontroller to adjust light intensity dynamically.
- Programmed the microcontroller in **C language** to process sensor signals and manage light intensity variations.
- Integrated two sets of IR sensors to count incoming and outgoing persons, ensuring accurate light control.
- Applicable in energy-saving systems for room lighting, air conditioners, and machine control.

## ResourceGuard resource management.                    07/2024 – 09/2024

ResourceGuard is a web application developed to streamline resource management for manufacturing companies. Key Features include

- Inventory Management: Tracks raw materials and finished products, minimizing stockouts and reducing excess inventory.
- Production Monitoring: Provides real-time insights on production lines to optimize output and reduce downtime.
- HR Management: Automates attendance logging, payroll calculations, and employee record-keeping.

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🔗 https://github.com/solomonferede1/resource_gaurd

## Automatic Ground Nut Hatching Machine

Designed and developed a machine powered by a single-phase induction motor to automate the hatching process of groundnuts. This system enhances efficiency, reduces labor, and ensures consistent quality in groundnut processing.

Groundnut - Solomon Ferede Ezez

## EEP Communication Portal (Web Application)          01/02/2025 – Current

**Project Summary:**

Developed a digital communication portal for EEP to manage news articles, media monitoring, and weekly reporting, with a Python-driven backend to automate data processing and improve internal communication workflows.

**Key Contributions:**

- Developed backend logic using **Python** for handling news submission, media monitoring data, and automated weekly reports.
- Built RESTful API endpoints (Python) for content management and communication between the frontend and database.
- Implemented efficient data storage and querying using **Python + MySQL**.
- Created automation scripts in Python to streamline repetitive communication tasks and improve workflow efficiency.
- Integrated the Python backend with a React frontend for seamless user experience.
- Ensured scalable, maintainable, and clean Python code following modern development standards.

🔗 https://drive.google.com/file/d/1GoCpHb8ar7McrKVBbdsiwSvckCZUJ_OI/view?usp=sharing
🔗 https://github.com/solomonferede/eepcommunicationportal

# RECOMMENDATIONS

## Chala Merga  Advisor

Ph.D. Assistant Professor Addis Ababa University, Addis Ababa, Ethiopia

✉ chala.merga@aait.edu.et

## Yeshitla Hailu  `Supervisor`

Lecturer of Electrical and Computer Engineering at Hawassa University

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📞 (+251) 922084168    ✉ robe.hailu@gmail.com

**Hide attachments** ⌃

Yeshitla Recomendation

## Daniel Gosaye  `Co-worker`

Lecturer of Electrical and Computer Engineering, Wolaita Sodo University, Ethiopia.

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📞 (+251) 923308213    ✉ daniel.gosaye@wsu.edu.et

# HOBBIES AND INTERESTS

## Professional Development

- *Programming and coding*
- *Robotics and automation*
- *Renewable energy research*
- *Data analysis and visualization*

## Creative Interests

- *Photography*
- *Graphic design*
- *Video editing*

## Outdoor Activities

- *Nature Exploration*
- *Traveling to new places*

## Sports and Fitness

- *Playing football (soccer)*
- *Swimming*

## Educational and Intellectual Interests

- *Reading (fiction, non-fiction, or academic topics)*
- *Exploring history or culture*

# DRIVING LICENCE

**D1**    24/12/2025 – 24/12/2027

# PUBLICATIONS

## Adaptive Fuzzy PID Control of Two-DOF Pneumatic Artificial Muscle Manipulator for Rehabilitation

2025 | Ferede Ezez, S., Merga Abdissa, C., & Bekele Leza, M. (Under review).

This paper presents an adaptive fuzzy PID control strategy for a two-degree-of-freedom pneumatic artificial
muscle manipulator intended for leg rehabilitation. The proposed approach addresses nonlinearities and
unmodeled dynamics inherent in PAM systems. Simulation results in MATLAB/Simulink demonstrate improved
transient response, disturbance rejection, and robustness, highlighting relevance to rehabilitation robotics and medical technology.

Authors: **Solomon Ferede Ezez; Chala Merga Abdissa; Melkamu Bekele Leza** | Journal Name: **Engineering Reports (Wiley)**

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