

Tseganeh Amare Biresaw

Email: tseganehamare@gmail.com | Phone: +251 0928676954 | Addis Ababa, Ethiopia

Profile

Full Stack Developer and Certified Drone Pilot Instructor (AUVSI) with a strong background in unmanned systems, electronics, and communication technologies. CCNA-certified across all core modules (CCNA 1, 2, and 3), with hands-on experience in building and integrating unmanned ground vehicles (UGVs) using Veronte Autopilot systems. Skilled in embedded programming, electronics design, and control systems integration. Experienced with Ultramotion servo systems, interfacing with various industrial and communication sensors, and working with advanced tactical communication solutions including DTC (Domo Tactical Communications) radios. Combines deep technical knowledge with practical field experience, offering a robust skill set ideal for autonomous systems development, drone instruction, and networked Automated solutions.

Skills

- **Languages:** HTML,CSS,JavaScript,c++
- **Frameworks:** Bootstrap,React, Node.js, Express
- **API Development:** RESTful APIs, JWT Authentication, OAuth2, Postman
- **Databases:** MongoDB,PostgreSQL, SQLite (for testing/small projects)
- UAV/UGV Development & Integration
- Veronte Autopilot Systems
- Programming and Configuring Ultramotion Servos
- Industrial Sensor Interfacing
- DTC (Domo Tactical) Radio Systems
- Embedded Programming & Electronics
- Networking, Routing, Switching & Automation
- Soft Skills: Problem-solving, team collaboration, mentorship, software testing

Professional Experience

INSA- Trainee

- On-Site
- Addis Ababa,2017-01-30 - 2017-10-05

INSA- GNC Researcher

- On-Site
- Addis Ababa,2017-10-06 - 2020-06-09

INSA- Remote Control Software Developer

- On-Site
- Addis Ababa, 2020-06-102 - 2022-04-12

INSA- Avionics and System Control (Remote Control Software Developer Supervisor)

- On-Site
- Addis Ababa, 2022-04-13 - up to Now

Programming Languages

- JavaScript
- C++
- Block Programming
- Python

Tools & Platforms

- Git
- Docker
- Linux
- Cisco Packet Tracer
- 4xVerontePDIbuilder
- 1xVerontePDIbuilder
- Veronte Ops
- Domo Node Finder
- QGIS
- Oracle VirtualBox, Linux OS (Ubuntu)
- VMware, Windows Server 2022, Active Directory Tools, Group Policy Management Console, Windows 10 Enterprise
- Serial Communication & Terminal Emulators (PUTTY, Tera Term)
- Wireshark Network Analyzer

Full-Stack Developer

- Built RESTful APIs using Node.js and collaborative projects.
- Participated in agile development practices, version control with Git, and peer code reviews.
- Developed database schemas and implemented token-based authentication.

Projects

E-Commerce APP

- Build, deploy, and scale an E-Commerce app using Microservices built with Node, React, Docker and Kubernetes

- On the frontend, i use React and Next JS to present content to users
- Each service is created using Node and Express. Data for each service is held in a Mongo database. The entire app is deployed and runs in Docker containers executed in a Kubernetes cluster

Autonomous UGV System

- Designed and built an Unmanned Ground Vehicle (UGV) using Veronte autopilot for navigation and control.
- Developed embedded software to interface with Ultramotion servo systems and industrial sensors.
- Integrated DTC (Domo Tactical Communications) radio for secure telemetry and remote command.

Windows Server 2022 Home Lab Project: March 2024 - present

- **Objective:** Set up a Windows Server environment to practice Active Directory management and network configuration.
- **Tools and Technologies:** VMware, Windows Server 2022, Active Directory Tools, Group Policy Management Console, Windows 10 Enterprise
- **Tasks:**
 - Installed and configured Windows Server 2022 on a virtual machine
 - Set up and managed Active Directory, including creating and managing user accounts, groups, and organizational units
 - Implemented Group Policy Objects (GPOs) to enforce security policies
 - Set up file sharing within the AD environment

Linux in a Virtual Machine Home Lab Project

- **Objective:** Prepare a Computer for Virtualization, Install a Linux OS on the Virtual Machine and Explore the GUI.
 - **Tools and Technologies:** Oracle VirtualBox , Linux OS image(ubuntu)
 - **Tasks:**
 - Part 1: Prepare a Computer for Virtualization
 - Step 1: Download and install VirtualBox
 - Step 2: Download a Linux Image
 - Step 3: Create a New Virtual Machine
 - Part 2: Install Ubuntu on the virtual machine
 - Step 1: Mount the Image
 - Step 2: Install the OS
 - Part 3: Explore the GUI
 - Step 1: Install Guest Additions
-

Education

Electrical Engineering

- Addis Ababa Institute Of Technology | Addis Ababa, Ethiopia
- 10/2012 - 07/2016

Courses

CCNA: Introduction to Networks

- **Cisco Networking Academy and Addis Ababa University:**
Skills: Ethernet, IP connectivity, IP services, IP Subnetting, IPv4 And IPv6 Addressing, Network Fundamentals, Security Fundamentals, Switching!
- May 02, 2025 | School of Information Technology and Engineering (SITE), Addis Ababa University, Ethiopia

CCNA: Switching, Routing, and Wireless Essentials

- **Cisco Networking Academy and Addis Ababa University:**
Skills: Access Connectivity, Access Security, First-hop Redundancy, High Availability, IP services, Routing, Switching Protocols, Wireless LAN Controllers!
- June 25, 2025 | School of Information Technology and Engineering (SITE), Addis Ababa University, Ethiopia

CCNA: Enterprise Networking, Security, and Automation

- **Cisco Networking Academy and Addis Ababa University:**
Skills: Dynamic Routing, Network Address Translation (NAT), Network Automation Basics, Quality Of Service (QoS), Security Threat Mitigation, Software Driven Networks, Virtualization, Wide Area Networks!
- August 28, 2025 | School of Information Technology and Engineering (SITE), Addis Ababa University, Ethiopia

Certificate of Drone and Data Technology Level 1

- **Virginia Tech, Furman University & MUST:**
 - 1) Data Module - The first 3 weeks cover data analysis; GIS fundamentals, data types & co-ordinate systems, multispectral sensing, introduction to computer vision and machine learning, advanced spatial analysis methods, data ethics etc. Different mapping applications e.g. agriculture, disease control, emergency response, flood modeling, infrastructure management etc.
 - 2) Drone Module - In the 4th & 5th week, students are introduced to unmanned aerial systems; flight physics, aircraft performance, propulsion systems, aerostuctures, payloads, flight operations, wireless communications etc. will also be covered
-

- 4 Sep - 7 Oct, 2022 | Malawi University of Science and Technology(MUST),Malawi

Certificate of Drone and Data Technology Level 2

- **Virginia Tech, Furman University & MUST:**
CDDT Level 2 is a 6 week in-person course that builds on the theory covered in CDDT Level 1. Various lab sessions e.g. propulsion systems, camera integration, radios are covered.Build fixed wing and quadcopter drones from scratch, troubleshoot them, and fly them. Furthermore, work on design projects that include data collection campaigns and analysis. A hands-on entrepreneurship module is also included.
1) CDDT Level 2 Certificate issued by Virginia Tech, Furman University, and Malawi University of Science and Technology (MUST).
2) Trusted Operator Program (TOP) Level 2 Certificate issued by AUVSI
3) Malawi Remote Pilot License (RPL) issued by Malawi Department of Civil Aviation (DCA)
- 20 Feb - 31 March, 2022 | Malawi University of Science and Technology(MUST),Malawi

Remote Pilot Instructor

- **Virginia Tech, Furman University & MUST:**
A) Trusted Operator Program (TOP) Instructor Certificate issued by AUVSI!
- 28 Oct - 31 Oct, 2024 | Malawi University of Science and Technology(MUST),Malawi

Languages

English - Professional Proficiency
Amharic - Native

Interests

System Design | Studying | Continuous Learning

Certifications

CCNA: Introduction to Networks, 2025



Certificate of Course Completion

Tseganeh Amare

has successfully achieved student level credential for completing the CCNA: Introduction to Networks course.

The student was able to proficiently:

- *Configure switches and end devices to provide access to local and remote network resources.*
- *Explain how physical and data link layer protocols support the operation of Ethernet in a switched network.*
- *Configure routers to enable end-to-end connectivity between remote devices.*
- *Create IPv4 and IPv6 addressing schemes and verify network connectivity between devices*
- *Explain how the upper layers of the OSI model support network applications.*
- *Configure a small network with security best practices.*
- *Troubleshoot connectivity in a small network.*



Issued on: May 02, 2025

Lynn Bloomer

Lynn Bloomer
Director, Cisco Networking Academy

CCNA: Switching, Routing, and Wireless Essentials, 2025

Certificate of Course Completion

Tseganeh Amare

has successfully achieved student level credential for completing the CCNA: Switching, Routing, and Wireless Essentials course.

The student was able to proficiently:

- *Configure VLANs and Inter-VLAN routing applying security best practices.*
- *Troubleshoot inter-VLAN routing on Layer 3 devices.*
- *Configure redundancy on a switched network using STP and EtherChannel.*
- *Explain how to support available and reliable networks using dynamic addressing and first-hop redundancy protocols.*
- *Configure dynamic address allocation in IPv6 networks.*
- *Configure WLANs using a WLC and L2 security best practices.*
- *Configure switch security to mitigate LAN attacks.*
- *Configure IPv4 and IPv6 static routing on routers.*



Lynn Bloomer

Lynn Bloomer
Director, Cisco Networking Academy

Issued on: Jun 25, 2025

CCNA: Enterprise Networking, Security, and Automation, 2025

Certificate of Course Completion

Tseganeh Amare

has successfully achieved student level credential for completing the CCNA: Enterprise Networking, Security, and Automation course.

The student was able to proficiently:

- *Configure single-area OSPFv2 in both point-to-point and multiaccess networks.*
- *Explain how to mitigate threats and enhance network security using access control lists and security best practices.*
- *Implement standard IPv4 ACLs to filter traffic and secure administrative access.*
- *Configure NAT services on the edge router to provide IPv4 address scalability.*
- *Explain techniques to provide address scalability and secure remote access for WANs.*
- *Explain how to manage, optimize, monitor, and troubleshoot scalable network architectures and protocols.*
- *Explain how networking devices implement QoS.*
- *Explain how technologies such as virtualization, software defined networking, and automation affect evolving networks.*



Lynn Bloomer

Lynn Bloomer
Director, Cisco Networking Academy

Issued on: Aug 28, 2025

Remote Pilot Instructor

Association for Uncrewed Vehicle Systems International (AUVSI)
Trusted Operator™ Certification

Tseganeh Amare

has satisfactorily demonstrated the required level of knowledge, skills and proficiency for safe and reliable operation of uncrewed aircraft systems, as established by the Trusted Operator, and is hereby certified as a

TRUSTED OPERATOR

Certification Category: 04 - Remote Pilot Instructor

Certification Level: 2

Certification Identification Number: 947

Certification Date: 27 November, 2024

This certification is valid through: 30 November, 2026

Certification awarded by:
African Drone & Data Academy
AUVSI Authorized Partner
Partner ID: 1008

Kevin Kochersberger

Name

Signature

Certificate Of Drone And Data Technology



Tseganeh Amare

has successfully completed the below program:

Certificate of Drone and Data Technology (CDDT) Level 2

20 Feb – 31 March, 2023

Certificate ID: CDDT 2 - 0647

Dr. Kevin Kochersberger
Associate Professor,
Mechanical Engineering
Virginia Tech



Dr. Suresh Muthukrishnan
Professor and Chair,
Earth, Environmental, and Sustainability Sciences
Furman University



Dr. Address Mauakowa Malata
Vice Chancellor
Malawi University of Science
and Technology





Build Dynamic Web Apps with React & Firebase



Certificate no: UC-00941c02-ba77-494b-8770-35063abdb842
Certificate url: ude.my/UC-00941c02-ba77-494b-8770-35063abdb842
Reference Number: 0004

CERTIFICATE OF COMPLETION

Build Web Apps with React & Firebase

Instructors **The Net Ninja (Shaun Pelling)**

Tseganeh Amare

Date **April 28, 2023**

Length **23.5 total hours**

Build, deploy, and scale an E-Commerce app using Microservices built with Node, React, Docker and Kubernetes



Certificate of Course Completion

Tseganeh Amare

has successfully achieved student level credential for completing the CCNA: Introduction to Networks course.

The student was able to proficiently:

- *Configure switches and end devices to provide access to local and remote network resources.*
- *Explain how physical and data link layer protocols support the operation of Ethernet in a switched network.*
- *Configure routers to enable end-to-end connectivity between remote devices.*
- *Create IPv4 and IPv6 addressing schemes and verify network connectivity between devices*
- *Explain how the upper layers of the OSI model support network applications.*
- *Configure a small network with security best practices.*
- *Troubleshoot connectivity in a small network.*



Lynn Bloomer

Lynn Bloomer
Director, Cisco Networking Academy

Issued on: May 02, 2025