

BIRUK EPHREM

DevOps Engineer & Full Stack Developer

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Summary

DevOps Engineer and Full Stack Developer with 5+ years of experience building scalable web applications, automating deployments, and implementing cloud infrastructure. Skilled in AWS, Docker, Kubernetes, and modern JavaScript frameworks. Passionate about creating efficient systems and leveraging AI/ML technologies.

Experience

Senior DevOps Engineer

One Planet International School | Addis Ababa (Remote) | 2025-12 - Present

- Responsible for implementing and managing CI/CD pipelines and cloud infrastructure. Automate deployment processes and maintain scalable cloud solutions for the institution.

DevOps Engineer

ETTA Solutions PLC | Addis Ababa | 2025-01 - Present

- Implement CI/CD pipelines to automate deployments and improve release cycles. Design and maintain scalable cloud infrastructure for client solutions. Improve system integrations and ensure high availability of services.

Senior Software Engineer

Faris Technologies | Addis Ababa | 2023-12 - 2025-02

- Developed ICT solutions for diverse business requirements. Collected Amharic language data through web scraping using Puppeteer, Scrapy, and Selenium. Published dataset on HuggingFace and contributed to LLM fine-tuning efforts. Built and maintained full-stack applications using modern frameworks.

Full Stack Developer

Netib Consult | Addis Ababa | 2021-12 - 2023-12

- Designed and implemented user interfaces for web applications. Developed and managed backend servers and databases. Delivered end-to-end solutions for client projects.

Web/Game Developer

Desert Rose | Addis Ababa | 2020-11 - 2021-06

- Digitized an existing board game for online multiplayer access. Designed UI/UX and implemented frontend and backend systems. Integrated game servers with Telegram bot for user engagement.

Projects

Ethiopian-Gregorian Date Converter

Tech: TypeScript, npm

Open-source TypeScript library for converting between Ethiopian and Gregorian calendars. Published on npm with built-in type declarations. Handles leap years in both calendars, uses 4-year term cycle conversion, and provides a simple API with GDate and EthDate classes. Used in production applications requiring Ethiopian calendar integration.

MySMS - SMS Gateway Service

Tech: Node.js, TypeScript, Express, Socket.IO, TypeORM, PostgreSQL, Flutter

Self-hosted SMS gateway service that provides an API for programmatic SMS sending using Android phones as SMS modems. Built with a RESTful API backend and Flutter Android app that connects via Socket.IO to send SMS messages. Features include message queue management, delivery status tracking, rate limiting, and authentication. Currently expanding to integrate with SMS providers including Twilio and Ethio Telecom SMS Centers. Used by personal network for reliable SMS delivery.

CoC Exam Tracking & Certificate Management

Tech: Next.js, TypeScript, Node.js, Prisma, PostgreSQL, shadcn/ui, GitHub CI/CD

Built for a Certificate of Competence training center in Addis Ababa to streamline exam tracking and certificate management. Tracks registrant completion status, monitors the overall certification process, analyzes agent performance by success rate with filtering capabilities. Features user management, attendance tracking, broker analytics, training center management, certificate generation, and comprehensive reporting. Deployed with GitHub CI/CD pipeline to VPS.

Attendance, Warehouse and Finance Management System

Tech: Node.js, MySQL, React

A comprehensive system built for Muntaha Foundation that automates beneficiary registration, attendance tracking, warehouse inventory management, and donation/payment tracking.

Restaurant Order Automation

Tech: Node.js, MySQL

Developed for Luna Group. Automates restaurant order processing and generates financial reports integrated with cash register systems.

Amharic Corpus Data

Tech: Python, Scrapy, Web Scraping

Collected Amharic language corpus data from web sources, PDFs, and social media. Published as an open-source dataset on HuggingFace for NLP research.

Rental Property Management System

Tech: Next.js 15, React 19, Node.js, TypeScript, Express.js, TypeORM, MySQL, Socket.IO, TailwindCSS, Zustand, PM2, Nginx

A comprehensive full-stack rental property management system for Ethiopian commercial real estate. Features Ethiopian calendar integration (13-month system), custom SMS gateway via Socket.IO, automated payment scheduling, bank transfer verification, PDF report generation with Ethiopian font support, and role-based access control. Digitalizes the complete rental lifecycle from tenant onboarding to payment reconciliation.

Technical Skills

AI & Data: LLM, LangChain, Ollama, Puppeteer, Scrapy, Transformers, Web Scraping

Backend: Laravel, Node.js, Prisma, Python, RESTful API, TypeORM

Cloud & DevOps: AWS, Docker, Git, GitHub, Kubernetes, Linux Server, Nginx, Serverless

Databases: MongoDB, MySQL, PostgreSQL, VectorDB

Frontend: CSS3, HTML5, JavaScript, Next.js, Nuxt.js, React, SCSS, TailwindCSS, TypeScript, Vue.js

Other: C, C++, Java, Photoshop, WordPress

Education

ALX - Software Engineering Program

February 2022 - March 2023

12-month intensive program with specialization in Backend Development

Udacity - Cloud Developer Nanodegree

August 2022 - December 2022

AWS services, Full Stack applications on AWS, Serverless Framework

Information Network Security Agency (INSA) - Cybersecurity Program

March 2023 - May 2023

Training in cybersecurity, mobile security and privacy, system security

Addis Ababa Science and Technology University - Electrical and Computer Engineering

September 2015 - July 2021

Coursework only

Languages

Amharic (Native), English (Professional)