

# BETHELHEM MOLLA MERESSA

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## SOFTWARE ENGINEER | BACKEND & AI DEVELOPER

Software Engineer with experience in backend and web development, AI-powered applications, and system optimization. Proven ability in architecting dynamic web solutions, developing AI-based applications, integrating third-party services, and optimizing database performance. Skilled at cross-functional collaboration, project management, and community-driven educational initiatives.

## TECHNICAL SKILLS

- Programming Languages: Python, Java, PHP, C, C++, JavaScript
- Frameworks & Tools: Laravel, React.js, Node.js, Vue.js, Flask, VS Code
- AI/ML Technologies: PyTorch, TensorFlow, OpenCV, MediaPipe, Librosa
- Web Technologies: HTML5, CSS3, RESTful APIs, , WebSockets, WebRTC
- Databases: MySQL, SQL, Mango DB

## PROFESSIONAL EXPERIENCE

### Web Developer

Minya Art Space (USAID-Sponsored), Mekelle, Ethiopia

Jul 2024 – Present

- Architected and maintained dynamic websites using Laravel, ensuring optimal performance and security.
- Collaborated across teams to deliver educational web solutions.
- Provided ongoing technical support, ensuring uninterrupted digital operations.
- Led art workshops for children to boost creativity and community engagement.

*Technologies: Laravel, PHP, MySQL, HTML, CSS, JavaScript, SQL, Git*

### Backend Developer Intern

Ahaz Platform, Mekelle, Ethiopia

June 2024 – September 2024

- Engineered and optimized backend server logic leveraging Laravel, enhancing system reliability and responsiveness.
- Designed efficient SQL queries, improving database retrieval by 30%.
- Integrated third-party APIs, expanding platform scalability and capabilities.

- Collaborated with frontend developers on UX and code reviews.

**Technologies:** *SQL, Laravel, PHP, MySQL, DevOps*

## PROJECTS

### **AI-Based Cheating Detection System**

Developed an AI-based proctoring system using computer vision and audio analysis to detect cheating behaviors, integrating deep learning models (CNNs, ResNet18) with a secure full-stack platform (React.js, Node.js, MongoDB, WebRTC) focused on privacy.

### **Class Scheduling Application**

Built an Android app in Java/XML for class scheduling and attendance tracking, featuring an admin panel, student notifications, and a user-friendly interface.

### **Customer-Order-Management**

Developed customer order management system in Java, allowing users to manage inventory, process orders.

### **Disease-Prediction**

Developed a Python application that predicts possible diseases by analyzing symptoms provided as input using machine learning techniques.

### **Student Management system**

Developed a comprehensive web application that automates student registration, course enrollment, attendance tracking, grade management, and report generation. The system provides a centralized platform for managing student and academic records, streamlining communication and administrative processes in educational institutions

## EDUCATION

### **BSc in Computer Science**

Mekelle University – Mekelle, Ethiopia

## TRAINING & CERTIFICATIONS

- ALX AI Career Essentials Program

- Humanitarian tech support volunteer, Maedot