

# BIRUK MIKIR

## Software Engineering Student | Fullstack Developer

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## SUMMARY

Software engineering student with strong problem-solving skills and hands-on experience in building complex backend systems, RESTful APIs, and database-driven web applications. Experienced in Laravel (MVC architecture), Node.js, Java, Python, SQL Server, and React through academic, hackathon, and real-world projects. Strong interest in backend architecture, scalable systems, authentication mechanisms, and cloud technologies

## EDUCATION

### BSc in Software Engineering

Bahir Dar University, Bahir Dar, Ethiopia

2023 – 2027 (Expected)

## EXPERIENCE

### Backend Developer – DUCA Innovation Project

Addis Ababa, Ethiopia | 2024 – Present

- Contributed to the design and development of an AI-powered vehicle detection system.
- Collaborated on backend logic, system design, and data processing.
- Participated in national-level competitions and technical presentations.
- Achieved Top 10 Finalist position in the I4P Hackathon.

## PROJECTS

### Job Portal Web Application (Laravel, Sanctum, Mailtrap, MySQL)

- Designed and developed a full-stack job portal web application using Laravel (MVC architecture)

- Built RESTful backend APIs for authentication, authorization, job posting, and application workflows.
- Implemented secure authentication using Laravel Sanctum and role-based access control.
- Integrated Mailtrap for email notifications and testing workflows.
- Gained deep experience building scalable, secure, and maintainable backend systems

### **Pharmacy Management System (JavaFX, SQL Server)**

- Developed a desktop-based pharmacy management system with CRUD operations and reporting features.

### **Private Cloud Simulation (CloudSim, Java)**

- Built and analyzed a private cloud simulation using virtual machines and cloudlets.

### **Secure Video Calling Platform (Laravel, Agora API)**

- Implemented secure video calling with token-based authentication.

### **NPK Soil Fertility Detection System**

- Developed a smart agriculture system integrating sensor data and backend logic.

## **SKILLS**

Programming Languages: Java, Python, C++, JavaScript

Backend & Frameworks: Laravel (MVC), Node.js, JavaFX

Frontend: React

Databases: SQL Server, MySQL

Tools & Platforms: Git, GitHub, Docker, CloudSim

Web Technologies: HTML, CSS, Tailwind CSS, XML

## **KEY ACHIEVEMENTS**

- Top 10 Finalist – I4P Hackathon (DUCA Team): Recognized for developing an AI-powered vehicle detection system.
- Backend System Development: Built a complex job portal backend demonstrating strong authentication, authorization, and API design skills.
- Academic Project Excellence: Delivered a fully functional Pharmacy Management System using JavaFX and SQL Server

## **LANGUAGES**

English – Proficient

Amharic – Native