

# Tekleab Gebremedhin

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## Summary

A highly motivated Computer Science and Engineering student with extensive experience in machine learning, desktop application development, and facial recognition systems. Proficient in Python, Java, JavaScript, Go and C++. Skilled in evaluating AI-generated code, solving coding problems, and optimizing code for maximum efficiency. Passionate about contributing to the development of AI models and writing robust test cases.

## Skills

**Languages:** C/C++, Python, JavaScript, TypeScript, Golang, SQL

**Technologies & Tools:** Docker, PostgreSQL, MySQL, Django, Django Rest Framework (DRF), PyQt, PySide, Flask, Numpy, Pandas, Matplotlib, Tensorflow, Scikit-learn, CNN, SQLite, React Native

## Work Experience

**Ipass Business Consultancy, Addis Ababa**

Mar 2024 - Present

*Software Engineer and IT Expert*

- Led the development and implementation of the company's Advanced and elegant stock management system which automates the client's management and control of their resources
- Optimized the performance of the system by 25% by applying different database optimization mechanisms and restructuring the API.
- Real-Time Notifications: Implemented realtime notifications for payment, stock status and expiry date. Summarized and analyzed reports using Python's data analysis and visualization libraries (Numpy, Pandas, Matplotlib).
- Python, PySide2, Django, Django Rest framework, PostgreSQL, MySQL, Docker, Numpy, Pandas, Matplotlib

**MU-MIT (Mekelle University - Mekelle Institute of Technology), Mekelle**

Jan 2024 - Jun 2024

*Software Development Engineer (intern)*

- Played a role on development of the university Project repository management system, enabling the institute to manage researches made by researchers and other university community in a concise way.
- Analyzed, customized, and integrated open source applications and deployed a robust and efficient PRMS (Project Management system) that can handle large data sets for their ML experiments in addition to other projects.
- Developed APIs to integrate and communicate with other systems such as university LMS (learning management system)
- Golang, Python, ownCloud, Docker, Git, Gitlab, JIRA, PostgreSQL, Collaboraonline, Gitea, FIGMA,

**Samaritan Purse, Mekelle - Ethiopia**

Oct 2022 - May 2022

*Software Engineer (volunteer)*

- Crafted a strategy to filter and group large amounts of beneficiary data and automated the organization's time-consuming manual tasks using Python, Numpy, Pandas and Django to process the big data of beneficiaries
- Developed and designed PostgreSQL database and APIs, ensuring readiness for integration with frontend and mobile applications in automating the food distribution system
- Optimized system performance by 25% through database optimization and API restructuring.
- Python, Numpy, ReactJS, Redux, Django Rest Framework, JWT, Docker, PostgreSQL

## Education

**Mekelle Institute of Technology - Mekelle University**

Sep 2019 - Dec 2024

BSc. in Computer Science and Engineering

**CGPA: 3.75/4.0**

Relevant Coursework: Object Oriented Programming, Databases, Discrete Maths, Data Structures and Algorithms, Operating Systems, Computer Networks, Machine Learning, Big Data Analytics, Design and Analysis of Algorithms, Artificial Intelligence, Image Processing

## Project Work

- **Stock Management System (2022):** Designed a desktop software system for pharmacies and related expiry date sensitive stores management which generates relevant and comprehensive report visualizations and implemented auto-completion as well as predicting stock flow. Used technologies such as Python, PyQt, PySide and PostgreSQL.
- **Social Media Application (2023):** A real time social media application developed using various frameworks such as React-js, Redux, Django Rest framework, Django-channels and JWT for standardized authentication and authorization system of the application.
- **Facial Recognition System (2023):** Introduced and worked with various machine learning models for facial recognition. Implemented data preparation and preprocessing techniques to enhance model performance. Evaluated model performance using different metrics, achieving over 97% accuracy, precision, and recall. Presented the project to guests and evaluators, receiving positive feedback and an A+ ranking. Used Numpy, OpenCV, Scikit-learn, Python, Tensorflow

## Awards and Certificates

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- Django Rest FrameWork and ORM from Udemy
- Machine Learning and DeepLearning: Supervised Machine learning-Regression, Classification from Coursera
- Frontend Software Developemet fundamentals with Vue.js MIT-Mekelle University
- Data Structures and algorithms with python full course
- ReactJS, the practical guide (including Redux) - Udemy

## Mentorship

- **AI Mentor at Mekelle American Corner:** Helping students and working professionals to get better at problem solving Artificial intelligence and Machine learning using python.
- **Mentor at Mekelle Community school:** Introducing high schoolers and professionals know about cyber-security, AI, and the importance of maths and communication skills to communicate with GenAI and computer programming.