

Michael Tsige Cherenet

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Professional Summary

Software engineer with a B.Tech in Computer Science (GPA: 9.38/10) and experience building full-stack web applications, real-time systems, and AI-powered tools using Node.js, Express.js, Python, React, and PostgreSQL. Delivered freelance projects for real clients including a Next.js booking system and a real-time WebSocket application with a Telegram Mini App. Currently a Technology Associate at V-Tech Solutions PLC, working on internal web applications and enterprise technical proposals. Published NLP researcher with two conference papers.

Education

- Hindustan Institute of Technology and Science Chennai, India
B.Tech Computer Science and Engineering; **GPA: 9.38/10**
First Class with Distinction · (Highest Honors) 2021 – 2025
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Programming Skills

- Programming Languages:** JavaScript, Python, C/C++, Java
 - Web & Frontend:** HTML, CSS, Bootstrap, Tailwind CSS, React.js
 - Backend & APIs:** Node.js, Express.js, Flask, FastAPI, RESTful APIs, WebSockets
 - Databases:** MongoDB, SQL, Mongoose
 - Software Concepts:** Object-Oriented Programming, MVC Architecture
 - Tools:** Git, GitHub, Linux, Docker, Kubernetes
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Relevant Coursework

- Core CS:** Problem-Solving using C, Data Structures, Design and Analysis of Algorithms, Computer Networks, Database Management Systems
 - Programming:** Object-Oriented Programming (C++), Java Programming
 - Data & AI:** Data Science using Python, Machine Learning, Artificial Intelligence, Deep Learning
 - Web Technologies:** Web Development
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Professional Experience

- V-Tech Solutions PLC** Addis Ababa, Ethiopia
Technology Associate Nov 2025 – Present

- Developed and maintained an internal web application using Next.js, React, and Flask with PostgreSQL, implementing user authentication, session management, and API endpoints for content delivery.
- Collaborated on technical proposals and RFP responses for enterprise cloud, software, and cybersecurity solutions, conducting requirement analysis and technical documentation.
- Supported solution implementation and delivery, coordinating integrations between vendors and client technical teams.
- Gained hands-on exposure to Enterprise Infrastructure and Security Solutions including WAF, DLP, SIEM, SD-WAN, and Private Cloud solutions.
- Participated in Cloud WAF migration project for Oromia Bank, including onboarding, configuration, and optimization.

- **Freelance Developer**

Independent

Remote
2024 – Present

- Developed a company website and service showcase for a freight and logistics firm using Next.js with responsive design and SEO optimization.
- Built a dental clinic website with an integrated online booking system, allowing patients to view available slots and schedule appointments through a web interface.
- Developed a real-time interactive system with WebSocket communication and a Telegram Mini App frontend, handling concurrent live sessions and state synchronization across users.

Projects

- **BookSwap: Full Stack MERN Application**

- Developed full-stack application using MongoDB, Express.js, React, and Node.js.
- Implemented JWT authentication and role-based access control.
- Designed RESTful APIs and integrated MongoDB database.
- Deployed application for production testing and usage.

- **DevDocs Assistant: AI-Powered Developer Documentation Tool**

- Built developer assistant using Retrieval-Augmented Generation (RAG).
- Designed pipeline for data scraping, preprocessing, and semantic search.
- Integrated large language model API for context-aware responses.
- Added optional local-model inference using Ollama.

- **Amharic Literature Transformer**

- Built transformer-based generative model for Amharic text generation.
- Designed custom tokenizer for Amharic script preprocessing.
- Implemented BERT-based authorship classifier.

- **Besh :Real-Time Multiplayer Number Game**

- Built a multiplayer number-matching game with a Next.js/TypeScript frontend, Node.js/Express backend with PostgreSQL, and a Telegram bot for game management.
- Implemented real-time game logic using Socket.IO with room-based matchmaking and live number calling across concurrent sessions.
- Developed the UI with Tailwind CSS and shadcn/ui, and containerized the Telegram bot with Docker.

Certifications

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| ● AWS Cloud Practitioner Essentials, AWS Training | December 2025 |
| ● Introduction to AWS Cloud: Builder Labs Learning Plan | December 2025 |
| ● The Ultimate MySQL Crash Course, Udemy | March 2025 |
| ● Artificial Intelligence Virtual Experience, Cognizant via Forage | April 2024 |
| ● Software Engineering Virtual Experience, JPMorgan Chase & Co. via Forage | August 2022 |

Research & Presentations

- Classification & Generation of Amharic Literature Using Transformers, ICCMAMT 2024
- Gig Marketplace Application Using Retrieval-Augmented Generation, ICSIE 2025

Leadership and Awards

- Study in India (SII) Scholarship Recipient, Government of India