



TAMERU HAILESILASSIE

SENIOR SOFTWARE ENGINEER | FRONTEND ARCHITECTURE | FULL-STACK & AI SYSTEMS

Addis Ababa, Ethiopia | UAE Resident | Remote Worldwide | +971 57 438 590

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EXECUTIVE PROFILE

Senior Software Engineer with 8+ years of experience shaping polished frontend experiences and the secure platforms behind them. Specializes in Angular architecture, design systems, state management, microfrontends, and accessible product delivery, with deep full-stack capability across Java/Spring Boot, APIs, microservices, PostgreSQL, and cloud platforms. Experienced in fintech, healthcare, transportation, and applied AI, with a current focus on responsible AI-assisted development and production-ready agentic-system patterns.

CORE EXPERTISE

Frontend Architecture: Angular 18, TypeScript, NgRx, RxJS, Nx, Angular Material, microfrontends, design systems, accessibility

Backend & Platform: Java, Spring Boot, Node.js, REST APIs, microservices, modular architecture, PostgreSQL

AI & Data: Python, machine learning, NLP, computer vision, predictive modeling, LLM/GenAI, retrieval and agentic workflows

Cloud & Delivery: AWS, Azure, Google Cloud Platform, CI/CD, API documentation, Agile delivery, technical leadership

PROFESSIONAL EXPERIENCE

Senior Software Engineer | Energis Cloud | 2024 - Present

Brussels, Belgium (Remote)

- Build and maintain high-performance Angular 18 applications, using NgRx to create predictable state flows and scalable frontend architecture.
- Lead modernization of legacy AngularJS functionality into maintainable Angular modules, improving code quality and long-term delivery speed.
- Create reusable components and accessible interfaces with Angular Material, aligning product experience with engineering standards.
- Collaborate across product and engineering teams to translate complex requirements into production-ready capabilities.
- Support adoption of AI-assisted engineering workflows, using Claude Code for codebase exploration, implementation planning, refactoring, and review while maintaining established quality controls.

Senior Software Engineer | EthSwitch S.C. | 2023 - Present

Addis Ababa, Ethiopia

- Engineer the National Bill Gateway core service, orchestrating payment-order creation, payment initiation, and completion flows for secure bill payments.
- Built the Angular Hosted Payment Page integrated with the gateway core service, delivering a clear, responsive payment journey across participating institutions.
- Developed a Bill Integration Service that retrieves outstanding bills from billers and sends payment-completion callbacks after successful transactions.
- Built a simulation bank service and companion mobile payment application used to demonstrate bank-side payment flows and validate integrations.
- Lead frontend and microfrontend architecture while guiding solution tradeoffs across security, reliability, maintainability, and product experience.

PROFESSIONAL EXPERIENCE - CONTINUED

AI Engineer | Ethiopian Artificial Intelligence Institute | 2022 - 2024

Addis Ababa, Ethiopia

- Designed machine-learning solutions for computer vision and natural-language-processing use cases, with particular focus on healthcare.
- Developed an AI-powered weather-forecasting initiative with the Ethiopian Meteorology Institute and supported model integration into operational workflows.
- Evaluated models using accuracy, precision, recall, ROC-AUC, and cross-disciplinary domain review; tuned solutions for production readiness.
- Worked with data scientists, healthcare professionals, and software engineers to move applied-AI concepts toward deployable systems.

Full-Stack Engineer | Capital Freight Solutions, Inc. | 2022 - 2024

Burlingame, California, USA (Remote)

- Delivered the Capital TMS SaaS platform across Angular interfaces and Spring Boot APIs for transportation-management workflows.
- Built responsive, component-driven experiences and service integrations supporting operational visibility and day-to-day freight processes.
- Used AWS, Azure, and Google Cloud Platform services to support scalable application deployment and management.

Software Engineer | Ezangery Medical PLC | 2020 - 2024

Addis Ababa, Ethiopia

- Helped design and implement an Electronic Health Record platform aligned with Ethiopian Ministry of Health standards.
- Integrated the platform with DHIS2 to support health-data reporting and analysis across operational workflows.
- Designed and optimized database structures for secure, efficient handling of sensitive patient information.
- Partnered with healthcare professionals and stakeholders to translate clinical requirements into usable digital workflows.

Lecturer | Addis Ababa Science and Technology University | 2017 - 2024

Addis Ababa, Ethiopia

- Taught programming fundamentals, advanced Java, C++, data structures, algorithms, design patterns, and software-development practices.
- Mentored students on technical and research projects and contributed to academic work in software engineering and AI.

EARLIER EXPERIENCE

Machine Learning Intern | Genome Institute of Singapore | Mar 2017 - Jul 2017

Developed models to predict tissue of origin from TCGA, ICGC, and GTEx RNA-Seq datasets; compared support vector machines and neural networks using cross-validation.

Software Engineering Intern | Information Network Security Agency (INSA) | Feb 2014 - Jul 2014

Contributed to a web-based HRMS initiative, technical specifications, documentation, and assessment of application concepts.

SELECTED LEADERSHIP & IMPACT

- Led teams of 5-10 developers and researchers across enterprise software and applied-AI initiatives.
- Mentored 15+ students in research and technical projects spanning AI/ML, fintech, and healthcare.
- Bridged engineering, domain experts, clients, and academic stakeholders to move complex work from concept to delivery.

SELECTED PRODUCT, PLATFORM & AI WORK

Projects are attributed to the organizations through which the work was delivered; descriptions focus on Tameru's contribution and avoid confidential implementation details.

National Bill Gateway Ecosystem / *EthSwitch S.C.*

Contributed across the transaction platform and customer-facing payment experience for a national bill-payment ecosystem, spanning gateway orchestration, biller integration, and demonstration tooling.

Technologies: Angular, TypeScript, Java, Spring Boot, REST APIs, microservices

Core Service: Facilitates payment orders, initiation, and completion while coordinating secure transaction flows.

Hosted Payment Page: Angular payment experience integrated with the core service for responsive, institution-ready checkout journeys.

Bill Integration Service: Retrieves bill details from billers and delivers payment-completion callbacks after successful settlement flows.

Simulation Bank & Mobile App: Demonstrates bank-side payment journeys and supports integration validation with stakeholders.

Capital TMS - SaaS Transportation Platform / *Capital Freight Solutions, Inc.*

Contributed across frontend and backend delivery for a transportation-management system supporting operational workflows, integrations, and responsive access across devices.

Technologies: Angular, TypeScript, Spring Boot, REST APIs, cloud platforms

Electronic Health Record Platform / *Ezangery Medical PLC*

Designed core software and data capabilities for an EHR platform, including DHIS2 integration, health-reporting workflows, patient-data handling, and collaboration with clinical stakeholders.

Technologies: Angular, backend services, relational databases, DHIS2

AI-Powered Weather Forecasting / *Ethiopian AI Institute / Ethiopian Meteorology Institute*

Developed and evaluated machine-learning approaches for weather forecasting and supported the transition from model experimentation toward operational use.

Technologies: Python, machine learning, model evaluation, forecasting

EDUCATION

M.Sc. Computer Science and Engineering | National University of Science and Technology, Moscow | 2015 - 2017
CGPA: 5.0/5.0. Specialization: innovative software systems. Thesis: Rule Extraction Algorithm for Deep Neural Networks.

B.Sc. Electrical and Computer Engineering | University of Gondar | 2010 - 2015
CGPA: 3.83/4.0. Specialization: computer engineering. Thesis: Lung Cancer Detection Using Artificial Neural Networks.

Next Generation Computer Network Technologies | Center for Excellence in Telecom Technology and Management, Mumbai | 2018

RESEARCH & PUBLICATIONS

- Hailesilassie, T. "Rule Extraction Algorithm for Deep Neural Networks: A Review." arXiv:1610.05267 (2016).
- Hailesilassie, T. "Financial Market Prediction Using Recurrence Plot and Deep Convolutional Neural Network."
- Presented "Rule Extraction Algorithm for Deep Neural Networks" at the 32nd NeurIPS Annual Conference poster program, Montreal.

SELECTED RECOGNITION

Russian Federation Government Scholarship | National Academic Award (2015) | First-Class Student Award, University of Gondar | Recognition for excellent academic achievement and undergraduate research presentation