

ABENEZER SILESHI BEKELE

Full Stack Developer | AI-Integrated Systems | React.js · Next.js · NestJS · Django REST Framework

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PROFESSIONAL SUMMARY

Full Stack Developer with 3+ years shipping production systems across healthcare, government-affiliated education, and SaaS. Built and currently maintain a multi-tenant clinic platform serving 6–15 branch locations, combining AI voice agents (Retell AI, Twilio, OpenAI) with real-time scheduling and insurance workflows.

Delivered measurable performance gains on independent projects — including a 70% cut in dashboard load time via Redis caching and a reduction of order-processing time from 5–7 seconds to under 1 second via RabbitMQ — and designed a government-partnered exam microservice supporting multi-pool randomized assessments and automated grading.

Core stack: React.js, Next.js, NestJS, Django REST Framework, PostgreSQL, Prisma, Docker, AWS S3. Comfortable owning a feature end-to-end — API design, database schema, authentication/RBAC, queues (RabbitMQ/BullMQ), automated testing, CI/CD, and deployment. Remote-first workflow across GitHub, async documentation, and cross-timezone collaboration.

GITHUB ACTIVITY

85+ repositories · 1,730+ commits · 10+ public projects · github.com/abeni-hub

CORE SKILLS

Frontend: React.js, Next.js (App Router), TypeScript, Tailwind CSS, shadcn/ui, Zustand, React Hook Form, Zod, TanStack Query, Axios

Backend: NestJS, Node.js, Django REST Framework, Python, Laravel (PHP), REST & microservice API design, Passport.js, JWT Auth, Role-Based Access Control (RBAC)

Data & Messaging: PostgreSQL, MySQL, SQLite, Prisma ORM, RabbitMQ, Redis, BullMQ (queues & background jobs)

AI: OpenAI API, Retell AI, LangChain, AI Voice Agents, AI-powered Forecasting, TensorFlow (basic)

Cloud: AWS S3, Docker, Linux Server Administration, Git/GitHub, GitHub Actions (CI/CD)

Architecture: Clean Architecture, SOLID Principles, Repository Pattern, Modular Monolith, Event-Driven Architecture, REST API Design, Database Design

Security, Testing & Quality: JWT authentication, RBAC, input validation (Zod, DRF serializers), Jest, pytest, unittest, black, flake8, unit & integration testing

Soft Skills: System Design, Problem Solving, Ownership & Autonomy, Cross-functional Collaboration, Agile Development, Remote Collaboration

SOFTWARE DEVELOPMENT EXPERIENCE

Freelance Full Stack Developer — *Multi-Tenant Clinic Management Platform*

Nov 2024 – Present

Private Client · Freelance / Contract · Remote

Technologies: React, NestJS, Retell AI, Twilio, PostgreSQL, Amazon S3, Docker

Github: <https://github.com/sweatshirt2/smilecare-appointment-system>

- Built a multi-tenant clinic platform combining AI voice agents (Retell AI over Twilio) with clinic operations, automating appointment booking, insurance verification, and pre-visit intake through voice calls — removing manual front-desk intake for routine bookings across **6–15 branch locations**.
- Implemented the full appointment lifecycle (booking, approval, rescheduling, cancellation, refunds, no-shows, insurance verification) across multiple organizations and branches, with branch-aware access control and isolated tenant data.
- Built a real-time scheduling knowledge base so AI agents answer live questions on staff availability, branch services, hours, and insurance requirements without human handoff.
- Designed shift scheduling, dynamic staff allocation, and automated schedule-conflict detection across branches; containerized the platform with Docker and backed it with PostgreSQL and Amazon S3.
- Enforced JWT-based authentication and RBAC across tenant boundaries, with input validation on all API endpoints to protect patient and scheduling data.

ADDITIONAL EXPERIENCE

Full-time

- Maintain LAN/WAN network operations and troubleshoot core banking systems supporting daily branch operations; wrote Python scripts to automate internal diagnostics, reducing manual system checks.

FEATURED PROJECTS

SET Exam & Certification Platform — *Government-Affiliated Education Project**Status: In Development**Next.js 16, React 19, TypeScript, Tailwind CSS 4, Zustand, NestJS 11, Prisma ORM 7, PostgreSQL, JWT/RBAC***Github:** <https://github.com/segni9997/set-platform-be>

- Building a decoupled examination microservice integrating with an existing LMS via secure APIs and SSO, separating exam logic (question banks, sessions, grading, certificates) from LMS concerns (users, courses, payments).
- Designing multi-pool exam blueprints with randomized question extraction across MCQ, multi-select, true/false, fill-in-the-blank, matching, and essay formats, plus automatic grading with negative marking and a manual essay-grading queue.
- Delivering immediate, scheduled, and manual result-publishing workflows, autosave/session recovery, and verifiable certificate generation — in partnership with a government education body to certify tutors.

Enterprise Inventory Management Platform — *Independent Project**Status: Live**NestJS, Prisma, PostgreSQL, RabbitMQ, Redis, BullMQ, Telegram Bot API, AI/ML · Automated tests + CI/CD (GitHub Actions)***Github:** <https://github.com/abeni-hub/Enterprise-Inventory-Management-System-Demo>

- Reduced dashboard loading time by **~70%** through Redis caching.
- Introduced RabbitMQ for asynchronous order processing, cutting user-facing request time from **5–7 seconds to under 1 second** while improving system reliability during peak traffic.
- Implemented BullMQ background workers for report generation and Telegram notifications, reducing request-blocking time by **~95%**.
- Eliminated N+1 queries, cutting database calls by **~60%**.
- Integrated AI-powered inventory forecasting, reducing manual stock-planning effort by **~80%**.
- Automated stock notification workflows via a Telegram bot, saving **~3–5 hours** of administrative work per week.

Multi-Tenant Pharmacy SaaS Platform — *Independent Project**Status: Live**Django REST Framework, React, PostgreSQL · Automated tests + CI/CD (GitHub Actions)***Github:** <https://github.com/abeni-hub/Mutli-Tenant-Pharmacy-Backend>

- Designed a multi-tenant architecture supporting multiple organizations within a single deployment, cutting infrastructure costs by **~40%** compared to isolated deployments.
- Built subscription and plan management, reducing customer onboarding time from **30 minutes to under 5 minutes**.
- Implemented RBAC, real-time stock and sales analytics, expiration monitoring, and automated alerts across tenants; owned backend deployment, scaling, and security, with input validation enforced via DRF serializers on every endpoint.

OTHER NOTABLE PROJECTS

- **Terminal Roster** — transportation-sector platform built for a government client to manage terminal scheduling and roster operations.
- **Yenemekina** — online marketplace for buying and selling vehicles across multiple makes and models.

PROFESSIONAL ACHIEVEMENTS

- Built 6+ full-stack applications spanning healthcare, government-affiliated education, and SaaS domains.
- Developed government-affiliated education software deployed to certify tutors at scale.
- Delivered multiple multi-tenant SaaS platforms from architecture through production deployment.
- Built AI-integrated business automation systems, including voice-agent and forecasting workflows.
- Designed distributed, event-driven backend architectures using RabbitMQ and BullMQ for asynchronous processing.

EDUCATION

BSc in Computer Engineering — Dilla University, Ethiopia

CERTIFICATIONS

Django REST Framework (MindLuster) · Machine Learning with Python (freeCodeCamp) · Python for Everybody & Python Data Structures (University of Michigan) · Advanced Learning Algorithms (Coursera) · ALX Professional Foundations