

DERARTU NIGATU TUGE

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SUMMARY

Software engineer with 2 to 3 years of hands on experience, progressing from academic and project work to professional backend ownership of API gateway design, Redis performance tuning, and Telebirr payment integration at SKYKIN. Now building Retrieval Augmented Generation (RAG) systems with LLMs, vector search, and local models. Delivers end to end, partners across backend and frontend, and owns features from design through deployment.

PROFESSIONAL EXPERIENCE

SKYKIN

Addis Ababa, Ethiopia

Full Stack Developer

Jan 2026 to Aug 2026

- Architected RESTful APIs with Django and Django REST Framework, giving the Next.js and React frontends one consistent API layer for every feature.
- Engineered 3 core API gateway components (object storage, caching strategy, and rate limiting) to protect services from overload and abuse while keeping responses fast.
- Accelerated backend performance by adding Redis caching to cut repeated database reads across services.
- Streamlined releases by containerizing services with Docker, making deployments repeatable across environments.
- Enabled payments through Telebirr by integrating its SOAP and REST APIs (2 API styles) into the backend.
- Hardened services and API endpoints with authentication, input validation, and standard application security practices.
- Shipped features across 3 backend frameworks (Node.js, NestJS, Django REST Framework) and 2 frontend frameworks (Next.js, React), taking each from API design to user interface.
- Partnered with backend, frontend, and product teammates through code review and deployment, and owned the caching and rate limiting decisions for the API gateway.

PROJECTS

AI Chatbot with PDF RAG (Next.js, Supabase, pgvector, Groq)

github.com/derartuge19/support-bot

Live demo: spidey-chi.vercel.app | Deployed and publicly accessible

- Delivered solo a multi user chatbot with PDF grounded Q&A, owning architecture, build, and deployment across 4 platform services (Vercel, Supabase, Groq, Gemini).
- Implemented a 4 stage RAG pipeline (PDF parsing, chunking, Gemini embeddings, cosine similarity retrieval) using a custom Postgres function.
- Enforced per user data isolation with Supabase Row Level Security and streamed low latency answers using Groq.

Local LLM RAG System (Ollama, Qwen, all MiniLM)

In progress

- Designing a fully local RAG application running 2 local models (Qwen via Ollama for answers, MiniLM for embeddings) with zero external API calls.

SniPLY, Subscription Link Shortener (Django, React, Stripe, Redis, Docker)

github.com/derartuge19/sniPLY

Live API: sniPLY-ksfa.onrender.com | Frontend repo: github.com/derartuge19/sniPLY_frontend

- Launched a SaaS backend with 2 plans (Free at 100 links per month, and Pro) using Redis backed usage metering.
- Orchestrated Stripe checkout with 2 webhook events (subscription upgrade and cancellation), plus click analytics, QR code generation, and an admin dashboard tracking MRR and conversion rate.
- Deployed 6 fully documented API areas (auth, links, usage, billing, analytics, admin) with Docker on Render with managed Postgres and Redis.

MeriJob (Django, Go, Microservices)

- Decomposed a job matching platform into microservices, writing the majority in Python and 1 high performance component in Go.
- Defined 3 service boundaries (job ingestion, matching, user facing APIs) so each can be developed and scaled independently.

Flipstar (Django, React.js, React Native)

- Executed full stack development of an Instagram style social platform spanning 4 core feature areas: feeds, posts, media sharing, and user interactions.
- Released 2 clients, a Django and React.js web app and a React Native mobile app, with 3 PWA features: offline caching, push notifications, and install prompts.

ThinkTank (Kotlin, NestJS, PostgreSQL)

- Designed a role based idea submission platform with 2 visibility levels (private and public), authentication, and an admin approval workflow.

Zemenay Blog System (Next.js, NestJS)

github.com/derartuge19/Zemenay-Blog

- Established a plug and play blog platform with 4 backend modules (auth, posts, users, tags), JWT authentication, role based access control, rate limiting, and Swagger docs.

BookHaven (React, TypeScript, Node.js, Express, PostgreSQL)

github.com/derartuge19/bookhaven

- Developed a book e commerce platform covering 3 core user actions (browse, search, purchase), integrating the Google Books API for book data.

EDUCATION

ADDIS ABABA UNIVERSITY

Bachelor of Science in Software Engineering

Addis Ababa, Ethiopia

In progress

ADDITIONAL INFORMATION

- **Technical Skills:** Django, Django REST Framework, NestJS, Node.js, Express.js, RESTful APIs, GraphQL, Retrieval Augmented Generation (RAG), LLMs, embeddings, pgvector, Ollama, Groq, prompt engineering
- **Infrastructure and Payments:** Redis, Docker, microservices, API gateway design, object storage, rate limiting and caching strategies, application security, Telebirr, Stripe, SOAP and REST integration
- **Frontend, Mobile and Data:** React.js, Next.js, Vue.js, Tailwind CSS, Flutter, Kotlin, Jetpack Compose, React Native, PostgreSQL, Supabase, MongoDB, Render, Vercel
- **Programming Languages and Tools:** Python, TypeScript, JavaScript (ES6+), Java, Kotlin, Go, SQL, Git, GitHub, Postman, VS Code
- **Languages:** Amharic (native), English (professional working proficiency), Afaan Oromo