

Alexander Sokolov

Financial Data Engineer

Remote · UTC+7 · Full-time or contract

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Double-entry ledger engine — built from scratch · AI agent with live production data access ·

Also shipping production PHP/Laravel

Past a certain volume, bookkeeping becomes data engineering: I build systems where every cent of revenue, fees, cash and FX operations lands on the right account — by rule, traceably, and idempotently.

PROFESSIONAL PROFILE

Finance -> Engineering -> Fintech systems. The career has three stages:

- 1. 20 years in finance and management (through 2018).** Banking, investment companies, First Deputy CEO of a manufacturing and distribution holding, overseeing finance, marketing, and IT. Built managerial accounting from scratch, rolled out ERP, costed COGS for hundreds of SKUs, ran MLM finance. I know how a balance sheet, P&L, and cash flow statement work from the inside — I closed them by hand.
- 2. Transition into modern backend engineering (2018-2024).** Building on a math foundation (Lomonosov Moscow State University), deliberately learned the modern development stack and moved from first Python services to production systems on Django and FastAPI. 5 years on commercial projects (weather data, education platforms, e-commerce), building engineering depth: API architecture, relational databases, async, Docker, CI/CD.
- 3. Synthesis: Financial Data Engineering (2024 - present).** I build what neither bookkeeping nor classic development covers on its own: double-entry ledger engines, payout reconciliation, FX accounting, automated financial reporting — as code, not spreadsheets.

Target roles: Financial Data Engineer, Financial Ledger Engineer, Accounting Systems Architect, Transaction Reconciliation Engineer.

KEY COMPETENCIES

- Double-Entry Ledger Engine: built ledger cores (Account, LedgerEntry, Operation, Period), Single Source of Truth, chart of accounts, period close, preserved balance invariants.
- Financial Reporting Engine: automated generation of the three core financial statements (Balance Sheet, P&L, Cash Flow) by department and consolidated across the business.
- FX & Cash Accounting: accounting for currency-exchange operations, Realized FX Gain/Loss calculation, rate fixing at transaction time, cash and acquiring operations.
- Payout Reconciliation & Revenue Subledgers: automated reconciliation of payout batches from acquirers (Shopify Payouts, Stripe, Amazon) down to the cent, splitting gross revenue, fees, refunds, and holds.
- Dynamic Account Mapping & ERP: journal entry automation, dynamic subaccount mapping into the General Ledger / ERP (NetSuite, Odoo, QuickBooks, 1C).

- Idempotency & Data Replayability: idempotent financial data pipelines designed for safe replay without duplicate postings.
- Full-Stack Backend & AI: Python (Django, FastAPI, DRF, Celery), PHP 8.2 (Laravel 12), PostgreSQL, Redis, Docker, OpenAI API, MCP.

EXPERIENCE

Period	Phase	Company	Role
Jun 2026 - present	Fintech Engineering	Yesim (contract)	Backend Laravel Developer
Dec 2025 - present	Fintech Engineering	Fintech company (NDA)	Financial Data Engineer
May 2025 - present	Fintech Engineering	VitalityNode	Full-Stack / Financial Data Engineer
Aug 2024 - May 2025	Backend Development	Brif	Backend FastAPI Developer
Dec 2021 - Aug 2024	Backend Development	InterPress IH	Backend Django Developer
Feb 2021 - Dec 2021	Backend Development	Auroville Earth Institute	Full-Stack Django Developer
Jan 2019 - Dec 2020	Backend Development	Mother's flowers	Python Developer
2010 - 2018	Finance & Management	CIEL Trading House	First Deputy CEO (Finance, Marketing & IT)
Before 2010	Finance & Management	Banks, investment companies	Bank board chairman and senior management roles

KEY PROJECTS

Projects below are grouped by career stage: fintech engineering (2024 - present), backend development (2019-2024), financial management (through 2018).

Phase 1: Fintech Engineering (2024 - present)

1. Fintech company · Financial Data Engineer · Dec 2025 - present

- High-load financial system. Company name withheld under NDA.
- Designed and built a full double-entry ledger engine from scratch for a fintech platform (the engine serves thousands of client accounts and processes daily batches of currency-exchange and cash operations).
- Double-entry architecture (Python / Django / PostgreSQL):
 - Designed the ledger model (Account, LedgerEntry, Operation, Period), guaranteeing debit/credit equality with automatic zeroing of clearing accounts.
 - Implemented automatic client account opening; system accounts via data migrations, operational accounts via the admin panel.
 - Split the Person, User, and Client entities — postings are strictly tied to Client, eliminating data discrepancies.
 - FX Accounting:

- Implemented the full accounting cycle for conversion and currency-exchange operations.
- Built the mechanism for rate fixing and automatic Realized FX Gain/Loss calculation.
- Cash & Affiliate Subledgers:
 - Built the module for cash operations, balance inventory, and acquiring.
 - Set up the affiliate compensation subledger, fixing the accrual base at transaction time.
- Financial Reporting Engine (automating three statements):
 - Aggregation algorithms for automatic generation of the Balance Sheet, P&L, and Cash Flow.
 - Reports exported by department and branch, and consolidated across the business.
- Backend & AI Observability:
 - High-throughput REST API endpoints behind a gateway, SSE streams for support chats.
 - Production log-monitoring AI agent connected to Grafana via MCP to generate tickets for engineers.
 - MCP access to production databases (CRM and ledger) for diagnostics during development.

+ How the AI monitoring and DB access work

2. VitalityNode · Financial Data Engineer · May 2025 - present

E-commerce middleware, Shopify apps, and accounting tools.

- Pet Connector - Shopify App (Subscription & Billing Subledger):
 - Integrated the Shopify Billing API: freemium-conversion accounting, subscription plans, and platform fees.
 - Built 7 Smart Fields on customer profiles with an algorithm that auto-regenerates metafields if deleted.
 - Event-driven payout tracking with Klaviyo and GDPR webhooks.
- E-commerce & Financial Data Middleware:
 - GMC Scanner (Risk Radar): risk analysis of the Google Merchant Center feed and automatic Google Product Taxonomy category matching.
 - AI Content & SKU Taxonomy: automatic product classification and image-based risk scoring via OpenAI API (published on the Shopify App Store).

3. Yesim contract (eSIM provider) · B2B2C Financial Data Integration · Jun 2026 - present

Stack: PHP 8.2, Laravel 12, React 18, Shopify Polaris, App Bridge v4, MySQL, Redis.

- Building the backend of a B2B2C app with margin accounting on the PHP/Laravel stack.
- Financial logic: automatic merchant markup calculation (fixed and percentage), dynamic revenue split between the eSIM supplier and the seller.
- Idempotent orders/paid webhook processing, mapping thousands of eSIM plans, bulk metafield uploads, activation QR-code generation.

Phase 2: Backend Development — from first projects to production (2019-2024)

A period of deliberate immersion in backend engineering — from data-processing scripts to production systems on Django and FastAPI.

- **Brif (2024-2025):** high-load FastAPI backend for vectorized weather-data processing (NetCDF, BUFR) on NumPy, Pandas, xarray. Vectorized computation, REST API, monitoring.
 - **InterPress IH (2021-2024):** production Django system with a DRF REST API, third-party integrations, middleware, Swagger docs.
 - **Auroville Earth Institute (2021):** Django information system, migrating 30+ years of historical data from Excel to PostgreSQL.
 - **Mother's flowers (2019-2020):** first project — data collection, cleaning, and structuring on Python/MySQL.
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Phase 3: Financial and Operational Leadership (through 2018)

CIEL Trading House · First Deputy CEO (Finance, Marketing & IT) · 2010-2018

Manufacturing and MLM distribution of perfumes and cosmetics.

- Managerial accounting from scratch: built the full loop — Balance Sheet, P&L, Cash Flow.
- Production costing (COGS): costing model for hundreds of finished-goods SKUs and thousands of components under continuously rotating recipes.
- ERP rollout: migrated the entire company to 1C:Trade Management (production, warehouse, logistics, finance, HR).
- MLM finance: referral and agent compensation network for several thousand consultants.

Before 2010

Senior roles in banking and investment companies, including bank board chairman. FSFR license (2006, securities).

FINANCIAL COMPETENCIES

Accounting & reporting: Managerial accounting · Double-entry bookkeeping · Balance Sheet · P&L · Cash Flow · Consolidated reporting · Cash-flow management · Budgeting and variance analysis

Financial engineering: Double-Entry Ledger Engine · Audit-Grade Financial Systems · Payout Reconciliation · Revenue Subledgers · FX Accounting (Realized FX) · Affiliate Subledgers · Idempotency · Data Lineage · Closed Periods

Costing & MLM: COGS · Production costing · Referral and agent compensation calculation · Subscription models (SaaS Billing) · Margin analysis

Financial software: 1C:Trade Management · 1C:Accounting · Odoo · NetSuite · QuickBooks · Excel (Power Query, pivot tables) · Metabase

Markets & regulation: FSFR license (broker-dealer activity and securities management) · RAS (Russian Accounting Standards) · IFRS basics

TECHNICAL STACK

Backend: Python · Django · DRF · Django-Ninja · FastAPI · Celery · django-rq · PHP 8.2 · Laravel 12

Databases: PostgreSQL · pgbouncer · pgvector · MySQL · SQLite · Redis

API & Protocols: REST API · GraphQL · SSE · Webhooks · OAuth 2.0 · JWT · Telegram Bot API

AI & Developer Tools: Claude Code CLI · AntigraVity CLI (agy) · OpenAI API / Codex · MCP · Crawl4AI · VS Code · Cursor · Git

E-commerce & Platforms: Shopify Admin API · Shopify Billing API · Shopify Polaris · App Bridge v4

Infrastructure & Cloud: Docker · Nginx · Gunicorn · Google Cloud

Languages: Russian (native) · English (technical reading and writing, async communication)

EDUCATION & CERTIFICATIONS

- Lomonosov Moscow State University, Mathematical Methods in Economics
- “Financial Market Specialist” qualification certificate, FSFR Russia (2006)
- Managerial Accounting Diploma, Institute of Certified Financial Managers (ICFM, UK, 2011, Reg. No. 341048)
- “CFO: Financial Management of an Organization,” Moscow Business School (2010)