

Pourya Omidian

Principal Systems Architect | Founding Engineer | Head of Engineering

Location: Open to International Relocation & Visa Sponsorship (UAE / EU / UK / US / Global Remote)

Email: ceo@neonotion.net

Direct Phone: +1 (914) 999-2960

Portfolio & Live System: <https://neos.neonotion.net>

Corporate: <https://www.neonotion.net>

LinkedIn: [linkedin.com/in/itispourya](https://www.linkedin.com/in/itispourya)

EXECUTIVE SUMMARY

Visionary Principal Systems Architect and Founding Engineer with 15+ years of end-to-end engineering excellence, specializing in high-throughput enterprise web architectures, local-first distributed systems, and deterministic AI/ERP engines.

Architect and sole creator of **Neos** (Neo OS)—an enterprise-grade Connected Business Operating System spanning 28,000+ lines of modular, production-grade TypeScript across 25 integrated operational modules. Engineered a sub-380ms FCP, 60 FPS browser-native windowing desktop kernel that consolidates ERP, double-entry accounting, CRM, and real-time P2P communications into a single deterministic data plane, eliminating \$3,200/employee/year in SaaS fragmentation waste. Proven commercial track record directing international trade systems, multi-currency FX settlements, and industrial telemetry infrastructure across EMEA markets. Actively targeting Principal Systems Architect, Founding Engineer, or Technical Leadership roles with relocation sponsorship or high-impact global mandates.

CORE TECHNICAL COMPETENCIES & ARCHITECTURAL STACK

- **Architectural Paradigms:** Local-First Architecture, Event-Driven Systems, Single-Tenant VPC & Air-Gapped Topologies, Micro-Frontends, Double-Entry General Ledger (GAAP/IFRS), ACID Guarantees, Vector Clock Conflict Resolution, Merkle Audit Trails.
- **Languages & Core Runtimes:** TypeScript (Expert), JavaScript (ESNext/Modern), Python, SQL (PostgreSQL, SQLite), PHP, HTML5, CSS3/Tailwind.
- **Frontend Engineering & Virtualization:** React 18, Vite, Custom Window Management Kernel (Z-Index, Snapping, Virtual DOM recycling), Canvas API, Web Workers, IndexedDB, PWA Offline Engine, Sub-380ms FCP, Sustained 60 FPS.
- **Backend, Cloud & Security:** Node.js, Express, Google Cloud Platform (Cloud Run, Cloud SQL, Secret Manager, Containerization), Firebase (Firestore, Multi-Tenant Security Rules, Auth), Web Crypto API (Client-Side PBKDF2 600k rounds + AES-256-GCM), Docker.
- **AI & Deterministic Systems:** Google GenAI SDK, Context-Grounded RAG Pipelines, Vector Embeddings, Autonomous Deterministic Financial Modeling (Runway Simulation, Anomaly Detection), Multilingual Vision OCR (Arabic/Persian/Turkish/European VAT).
- **Real-Time & Protocol Mesh:** Zero-Dependency WebRTC Peer-to-Peer Mesh (MediaStreams, DataChannels, Whiteboard Collab), WebSockets, Real-Time State Sync.
- **Business Intelligence & Data Modeling:** Power BI, DAX, Python (Pandas, NumPy, Scikit-Learn), Google Advanced Data Analytics, Relational Formula Calculation Engines (Rollup, Lookup, Cross-Table Dependency Graphs).

FLAGSHIP ARCHITECTURAL PLATFORM: NEOS (NEO OS)

Founder & Chief Systems Architect | 2024 – Present

Live Production System: <https://neos.neonotion.net>

Architected, engineered, and deployed a browser-native Connected Business Operating System that re-bundles 10 disparate enterprise tools (ERP, Accounting, CRM, Inventory, Project Management, and Video Conferencing) into an atomic, sub-second operating kernel.

- **Monolithic-Efficiency Browser Desktop Kernel:**
 - Engineered a full windowing manager from scratch in type-safe TypeScript (28,000+ SLOC, 85+ modular components) featuring window virtualization, active z-index stacking, dock minimizing, and gesture snapping.
 - Achieved sub-380ms First Contentful Paint (FCP) and maintained a consistent 60 FPS frame rate under concurrent execution of multiple heavy operational apps.
- **GAAP/IFRS-Compliant Double-Entry Accounting Core:**
 - Designed and built an immutable 6-tier hierarchical ledger with automated debit/credit parity enforcement, 64-bit integer money units (zero floating-point drift), dynamic multi-currency FX revaluation across 160+ fiat currencies (ISO 4217), and digital asset tracking (BTC, ETH, USDT, SOL).
 - Implemented an automated cash-flow runway simulator and daily cryptographic Merkle root auditing to prevent unauthorized ledger tampering.
- **Universal Globalization & Multi-Calendar Mathematical Engine:**
 - Programmed high-precision mathematical algorithms synchronizing 8 astronomical and civil calendars (Solar Hijri 33-year leap cycle, Gregorian, Islamic Lunar Hijri, Hebrew, Buddhist, Japanese Gengō, and Chinese) with live dual/tri-calendar UI overlays.
 - Built an ergonomic bi-directional (RTL/LTR) engine supporting English, Persian, Arabic, and Dutch natively, coupled with a real-time Gemini AI translation pipeline covering 100+ languages.
- **Zero-Dependency WebRTC Collaborative Mesh:**
 - Conceived and shipped an in-house P2P WebRTC engine with real-time video/audio calling, screen sharing, and synchronized multi-user whiteboard canvas without relying on expensive third-party video subscriptions (Zoom/Twilio), delivering zero marginal per-minute infrastructure cost.
- **Client-Side Cryptographic Privacy Engine:**
 - Integrated the Web Crypto API to implement zero-knowledge client-side encryption using PBKDF2 (600,000 iterations, SHA-256) and AES-256-GCM, ensuring enterprise ledgers remain mathematically unreadable to host servers.
- **Enterprise Commercial Traction:**
 - Deployed into mission-critical commercial environments: powering an international fine carpet export firm (managing trade inventory and multi-currency quotations across Dubai, Hannover, and Milan), an industrial telemetry engineering firm, and a multi-provider clinical healthcare practice.

PROFESSIONAL EXPERIENCE & TECHNICAL LEADERSHIP

NEONOTION SOFTWARE & SYSTEMS STUDIO

Founder & Principal Systems Architect | 2008 – Present

- **Enterprise Web Architecture Delivery:** Delivered 40+ bespoke full-stack platforms, relational database models, and cloud-native backends for commercial clients in manufacturing, international commerce, logistics, and medical services.
- **High-Availability Cloud Infrastructure:** Architected multi-tenant, containerized backends on Google Cloud Platform and bare-metal environments, sustaining 99.9% measured uptime across multi-year operational lifecycles.
- **AI-Accelerated Engineering Pipeline:** Spearheaded AI-native development workflows, compressing systems design, prototyping, automated test coverage, and deployment timelines by 65% while maintaining strict zero-defect standards in production.
- **Technical Specifications & Documentation:** Authored exhaustive system architecture RFCs, database schema migration scripts, OpenAPI 3.0 REST specifications, and cryptographic security whitepapers for client technical committees and C-suite stakeholders.

SELECTED COMMERCIAL ADVISORY & TECHNOLOGY DIRECTORS ENGAGEMENTS

Commercial Technology Director & Strategic Systems Advisor | 2010 – Present

- **Modern Art Carpet (International Fine Carpet Exporter & Global Exhibitor):**
 - **Global Commerce & FX Operations:** Directed commercial digital infrastructure, multi-currency escrow models, and international trade fair logistics for flagship exhibitions in Dubai (DWTC), Hannover (DOMOTEX), and Milan.
 - **Operational Platform Deployment:** Deployed Neos to coordinate multi-warehouse overseas inventory, bespoke SKU provenance archives, and dynamic VIP buyer quotations, cutting manual order processing time by 78%.
 - **International Diplomatic Coordination:** Structured consular protocol operations, international trade delegation workflows, and institutional buyer relation pipelines.
- **Penta Tech (Industrial Telemetry & Engineering Solutions):**
 - **Tender & Sensor Telemetry Systems:** Evaluated and structured international engineering tender architectures; designed real-time operational telemetry consoles for industrial asset monitoring.
- **ALA Aesthetic Clinical Clinic (Healthcare & Clinical Practice):**
 - **Clinical Workflow & Privacy Architecture:** Engineered scheduling queue algorithms with custom buffer parameters and electronic health record interfaces aligned with clinical privacy safeguards.
- **Cross-Enterprise Business Intelligence & Predictive Analytics:**
 - Built executive-level Power BI reporting cockpits, automated ETL data extraction pipelines, and predictive Pareto (80/20) margin models for retail and wholesale distributors, optimizing inventory turn rates by 24%.

EDUCATION, ACADEMIC HONORS & CERTIFICATIONS

- **Harvard University** — CS50: Introduction to Artificial Intelligence with Python (Verified Certificate)
- **Harvard University** — CS50: Web Programming with Python and JavaScript (Verified Certificate)
- **Google** — Google Advanced Data Analytics Professional Certificate (Python, Statistical Modeling, Machine Learning, Predictive Regression)
- **Dubai Future Foundation** — 1 Million Prompters Program Certification (Prompt Engineering, LLM Orchestration, Autonomous Workflows)
- **University of Tehran** — Web Engineering & Advanced Software Development (HTML, CSS, PHP, SQL, JavaScript Architecture)

NOTABLE HIGHLIGHTS & KEY METRICS

- **Codebase Scale & Velocity:** 28,000+ SLOC of clean, type-safe TypeScript authored with zero architectural debt.
- **Runtime Efficiency:** Measured sub-380ms FCP, 60 FPS under active window stress, <15ms local query latency.
- **Data Invariants:** Formal double-entry ledger balance proof: Assets = Liabilities + Equity enforced at DB and application layers.
- **International Mobility:** Valid passport, fully cleared for global relocation, available for immediate technical evaluation and executive interviews.