IVAN DAKA

Senior AI Engineer · Senior Full-Stack Engineer

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SUMMARY

Senior AI Engineer with 12+ years of experience in software development across finance, healthcare and media. Currently building production AI for a leading cryptocurrency exchange: a multi-model LLM stack (GPT, Claude, Llama) with fine-tuning on internal and open-source data, RAG pipelines over live market data, AI agents for trading and analytics, and real-time fraud and risk detection embedded in latency-sensitive trading paths - work that contributed to a 38% increase in company profit. Thanks to a full-stack background, every model ships inside a system that is scalable, secure and measured.

SKILLS

- **LLMs:** choosing between commercial and open-weight models per task; fine-tuning on internal and open-source data; multi-model panels and routing; RAG over live data; vector databases and embedding search; evaluation pipelines.
- **AI agents & automation:** autonomous pipelines for trading, analytics and core business workflows; AI-driven risk analytics.
- **Applied ML:** predictive analytics, trading algorithms, real-time fraud and risk detection.
- **Data & serving:** real-time and big-data pipelines; inference inside latency-sensitive services; model dashboards.
- **AI / ML:** LLM fine-tuning, RAG, AI agents, machine learning, predictive analytics, trading algorithms, AI automation
- **Programming Languages:** Python, TypeScript, JavaScript, Go, Solidity, C++
- **Frameworks:** Node.js, NestJS, React, Redux, Angular, Vue
- **Data:** PostgreSQL, MySQL, MongoDB, DynamoDB, Redis, Hadoop, Spark, Cassandra, RabbitMQ
- **Cloud / DevOps:** AWS, Docker, Kubernetes, Jenkins, Git
- **Blockchain:** Web3.0, Solidity, Smart Contracts, MetaMask, blockchain integration

EDUCATION

Master of Science, Applied Mathematics - National Aviation University, 2013 - 2014
Bachelor of Science, Applied Mathematics - National Aviation University, 2009 - 2013

PROFESSIONAL EXPERIENCE

Senior AI/ML Engineer | **Confidential - Crypto Exchange (NDA)** May 2024 - Present
Company name withheld under NDA at employer's request. One of the world's largest cryptocurrency exchanges.

- Evaluated a wide range of LLMs, such as GPT, Claude and Llama, to match each task with the right model: a panel of models rules on high-stakes decisions, a single model handles routine work.
- Fine-tuned LLMs on internal and open-source data for market and risk analysis, cutting manual review time by roughly 31%.
- Built AI-driven trading and analytics systems, contributing to a 38% increase in company profit over the past year.
- Created RAG pipelines and AI agents that fuse live market data with fine-tuned model reasoning, with inference embedded directly in latency-sensitive trading paths.
- Implemented real-time risk management, fraud detection and analytics dashboards for trading performance, reducing fraud losses by an estimated 24%.
- Automated core workflows with AI/ML pipelines; wrote and deployed the smart contracts behind trading and analytics infrastructure, processing over $2.3M in daily transaction volume.

Technologies: Python, LLM fine-tuning, RAG, vector databases, AI agents, machine learning, data pipelines, RabbitMQ, Go, Node.js, TypeScript, Web3.0, Solidity, Smart Contracts, trading systems

Lead Software Engineer | **Arkis** Feb 2023 - May 2024
Institutional crypto prime broker across CeFi, DeFi and TradFi: $100M+ in credit deployed, zero bad debt.

- Architected the whole decentralized finance (DeFi) platform from zero - infrastructure, smart contracts and product - letting institutions borrow against multi-asset collateral with multichain undercollateralized leverage.
- Led the engineering from the first commit: the Go and TypeScript services, the React and Redux front end, and the wallet and smart-contract integration underneath.
- Designed AI-driven risk analytics on a microservices architecture: risk scores are cross-validated across independent services before any lending decision settles.
- Improved the existing liquidation-risk algorithm's accuracy by 78% during architecture planning, measured in stress tests on sudden, steep market crashes and spikes.
- Built fraud-detection systems specifically to stop borrowers cashing out debt and disappearing, and kept undercollateralized positions solvent with continuous collateral valuation.
- Integrated all major crypto wallets (MetaMask, WalletConnect, Coinbase Wallet, Trust Wallet) and built a proprietary wallet for secure blockchain transactions.

Technologies: Go, TypeScript, React, Redux, Web3.0, Solidity, Smart Contracts, MetaMask, Microservices, RabbitMQ, AI risk analytics

Senior Software Engineer | **DreamWorks Animation** Sep 2020 - Feb 2023

The studio behind Shrek, Madagascar, Kung Fu Panda and How to Train Your Dragon. Worked on the in-house tools its artists create and render films with, grounded in applied mathematics.

- Developed high-performance animation systems using WebGL and Three.js, improving artist workflow efficiency by 20%.
- Created and maintained the in-house production software artists use to create and render feature film content - the editing and rendering tools themselves, not the films.
- Made editing 50GB+ character assets instant and safe: nothing that size loads whole, so models were streamed and edited in pieces that still had to add up to one coherent character, and no edit could ever corrupt it.
- Built real-time collaboration on the same asset - two artists editing at once, each seeing the other's changes, with neither waiting on a lock nor overwriting the other.
- Engineered real-time, large-scale data pipelines powering interactive content, with Python for pipeline tooling and automation and C++ in the performance-critical core, compiled to WebAssembly for the browser.
- Owned the real-time 3D rendering pipeline and the scene-graph and animation systems in the browser, with native-speed compute modules in WebAssembly and production data persisted in PostgreSQL.
- Collaborated with animation and technical directors to optimize rendering performance across multiple film productions.

Technologies: Node.js, React, Redux, WebGL, Three.js, WebAssembly, Big Data, Python, C++, PostgreSQL, Redis

Solution Architect (Team Lead) | **Luxoft** Jul 2019 - Sep 2020

- **Healthcare:** engineered HIPAA/GDPR-compliant systems and a custom medical cryptocurrency, implementing cryptography and secure data transfer for sensitive patient and 3D imaging data.
- **Olympic Channel:** delivered real-time streaming applications for large-scale sports data and drove the platform's migration to a microservices architecture that held up under Games-scale global viewership.
- Unified the Olympic committee's records - thousands of competitions, athletes, staff and animals across every sport, held in dozens of incompatible formats - into one queryable data platform.
- Reconciled near-duplicate records across sources with Levenshtein-distance and related fuzzy-matching algorithms, running the merges as Spark jobs over Hadoop and keeping high-throughput results data in Cassandra.

Technologies: Node.js, NestJS, Java, React, Redux, Cryptography, Hadoop, Spark, Cassandra, Redis

Senior Software Engineer (Team Lead) | **Software MacKiev / LogicManager** Feb 2016 - Jul 2019

- **Risk & compliance:** led a team of 11 engineers building enterprise governance, risk and compliance software for international clients.
- Wrote the algorithms that score risk factors across custom issues, tasks and every record they link to; improved system scalability by 40% through optimized architecture.
- Rewrote the platform from ActionScript to React ahead of Flash's end of life, while it stayed in production for customers under regulatory oversight; held quality through pull-request review and test-driven development.
- **Genealogy:** owned the architecture and the microservices that keep Family Tree Maker - in print since 1989 - in sync across 3 platforms: Mac, Windows and Ancestry.
- **Education:** promoted to lead 5 apps for Chrome OS, iOS and desktop, sped up with C++, ASM.js and WebAssembly.

Technologies: Node.js, NestJS, TypeScript, Sequelize, React, Redux, Vue, Angular 2+, PostgreSQL, DynamoDB, MongoDB, AWS (Lambda, S3), C++, Emscripten, ASM.js, WebAssembly, Electron, Cordova, Jenkins

Senior Software Engineer | **ADKernel** Jun 2015 - Feb 2016

- Built full-stack features for an advertising platform - ad serving, targeting rules and reporting - on Node.js and Java.
- Sped up the front end by 68% with custom components, later published as open source.
- Boosted server performance by 23% by reworking how data was computed and cached.

Technologies: Node.js, Java, Rust, Express, Sequelize, PostgreSQL, React/Redux, SOAP, RESTful web services

Software Engineer | **Squarespace** Jan 2014 - Jun 2015

- Developed the platform core - the editor behind 1M+ business sites, where a regression hits all of them at once.
- Shipped features front to back: the React and JavaScript editor in the browser, the Java services on Spring and Hibernate behind it, and the MySQL schema under those.
- Full-stack development for a range of e-commerce projects, storefront through to schema.

Technologies: Java 8, Spring, Hibernate, React, JavaScript, MySQL, Node.js, Express, PHP, Laravel, PostgreSQL, AngularJS, jQuery, CSS3

Software Engineer | **Luxoft** Apr 2013 - Jan 2014

- Built the rich-internet front end of Deutsche Bank's internal risk-management platform - part of the bank's post-2008 rebuild of how it watched its own risk - in GWT, with the charts drawn in HTML5 canvas and SVG.
- Implemented live views tracking thousands of risk factors at once - market, credit, liquidity, counterparty exposure - and wired the risk models through Spring and Hibernate to Oracle, with the calculations kept in PL/SQL close to the data.

Technologies: Java 7, Hibernate, Spring, Oracle (PL/SQL), GWT, JavaScript, HTML5 (CSS3, canvas, SVG)