

Anton Vakulchyk

Senior Staff Software Engineer · Backend & Distributed Systems

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SUMMARY

Senior staff-level engineer with ~20 years architecting backend and distributed systems — high-throughput APIs, data pipelines, and cloud infrastructure — across healthcare, e-commerce, consumer mobile, and workplace SaaS. Two-time engineering manager who returned to deep IC work, driving system-level design, correctness under concurrency, and pragmatic delivery across teams. Most recently founded and built an AI platform end to end (Go/AWS, applied ML, native iOS) — pairing architectural breadth with hands-on depth.

EXPERIENCE



Founder & Engineer · TeraThreshold

Feb 2023 – Present

San Francisco, CA

- Building an AI platform that turns raw Garmin data into running-form analysis, injury-risk scoring, and daily readiness — architecting the system, the models, and the iOS product end to end.
- Designed an idempotent ingestion pipeline (Go, Kafka, DynamoDB) for Garmin's out-of-order, at-least-once webhooks; used atomic set operations and compound conditional writes to eliminate concurrent-writer races and double-counting.
- Engineered a simulation clock injected across all services — separating replayable business time from wall-clock time — cutting multi-day pipeline verification to seconds and failing loudly on misconfiguration instead of silently corrupting data.
- Built a multi-pathway injury-risk model (acute:chronic load, training monotony, recovery) and effort-zone segmentation via a hidden semi-Markov model with Viterbi decoding; shipped a native SwiftUI app with StoreKit 2 subscriptions and push-driven background sync.



Senior Software Engineer · Envoy

Oct 2019 – Jan 2023

San Francisco, CA

- Architected a centralized GraphQL gateway (Kotlin) federating dozens of internal REST APIs — resolving N+1 and over-fetching to give teams a unified, low-latency graph and accelerate frontend delivery.
- Designed core data-privacy infrastructure (PII lifecycle, enterprise compliance) for Envoy Protect & Visitors; led Ruby on Rails backend for Envoy Desks, modeling concurrent booking races and availability state.
- Re-architected Workplace Analytics ETL (dbt, DMS, Redshift, Kubernetes) to absorb large usage surges and generate reliable daily analytics without impacting transactional databases.



Senior Software Engineer · Razer

Sep 2018 – Oct 2019

San Francisco, CA

- Architected highly available microservices (Node.js, TypeScript, Java) powering the software ecosystem for Razer Phone & Razer Phone 2; designed GraphQL APIs tuned for mobile clients on variable cellular networks.
- Integrated Elasticsearch for high-speed search, dynamic content delivery, and telemetry; containerized services with Docker, Helm, and Kubernetes on AWS with auto-scaling for flagship-launch traffic spikes.



Senior Software Engineer · HotSchedules

Aug 2017 – Sep 2018

San Francisco, CA

- Architected non-blocking, event-driven JVM microservices (Vert.x) handling heavy real-time API traffic for dynamic shift scheduling without thread-blocking bottlenecks.
- Engineered Node.js APIs with polyglot persistence — DynamoDB for low-latency writes, MongoDB for documents, Redis for caching; streamlined CI/CD on AWS with Jenkins and Puppet.



Engineering Manager → Senior Software Engineer · BuyerQuest

May 2014 – Aug 2017

Cleveland, OH

- **Engineering Manager (2016–2017):** Led a cross-functional org of engineers, ETL specialists, and QA; standardized agile process, modern tooling, and CI/CD, cutting onboarding time and lifting code quality to hit enterprise delivery milestones.
- **Senior Software Engineer (2014–2016):** Architected high-volume B2B/B2C procurement on Magento Enterprise (custom Solr search, cXML); built fault-tolerant ETL (CloverETL, Java); drove monolith→microservices (PHP Lumen, Java Jersey) and early AWS Lambda serverless adoption.



Engineering Manager → Senior Software Engineer · Qure4u

Sep 2010 – May 2014

Bradenton, FL

- **Engineering Manager (2012–2014):** Led a fully distributed engineering/QA team delivering critical healthcare-portal releases under strict compliance and deadlines.
- **Senior Software Engineer (2010–2012):** Architected a high-traffic healthcare platform with secure SOAP/REST services and HL7/EDI for EHR interoperability; ran AWS infra (EC2, RDS, VPC, SQS/SNS) with RabbitMQ, Redis/Memcached, and payment/SMS integrations.



Software Engineer · Soft-Ukraine

Jul 2006 – Sep 2010

Dnipro, Ukraine

- Migrated legacy applications to the Zend Framework; built reusable OO modules and templates across Joomla, Drupal, Moodle, and WordPress.
- Designed and tuned complex MySQL (stored procedures, triggers, indexing); built automated data-integration pipelines normalizing XML/JSON/flat-file feeds; load-tested with JMeter and profiled with xDebug.

SKILLS

Languages	Go, Kotlin, Java, TypeScript/JavaScript, Ruby, PHP, Swift
Backend & APIs	Distributed Systems, Microservices, Event-Driven Architecture, GraphQL, REST, Vert.x, Ruby on Rails, Node.js
Cloud & Infra	AWS (Lambda, DynamoDB, Redshift, EC2, RDS, SQS/SNS, DMS), Kubernetes, Docker, Helm, Terraform
DevOps & Observability	CI/CD Pipelines (GitHub Actions, Jenkins, Puppet), CloudWatch, Datadog, Structured Logging, Metrics & Monitoring
Data	DynamoDB, PostgreSQL/MySQL, MongoDB, Redis, Elasticsearch, ETL/dbt, RabbitMQ
AI / ML	Applied ML, Time-Series Modeling, Hidden Markov Models, LLM/Agentic Application Design
Mobile	SwiftUI, StoreKit 2, APNs, iOS Architecture (MVVM)

EDUCATION

M.S., Information Technologies & Computer Science National Metallurgical Academy of Ukraine	2005 – 2008
B.S., Programming for Computer Engineering & Computerized Systems Paton College of Welding and Electronics	2001 – 2005