**Alexey Shvechkov**

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**Summary**

Technical leader & Principal Architect with 20+ years designing and delivering distributed systems, cloud-native platforms, and AI-driven solutions. Led $20M+ enterprise product portfolios from strategy to delivery, accelerating time-to-market by 40% and influencing architecture for teams of up to 100 engineers, QA, and support staff. Hands-on leader skilled in C++, Go, Rust, and Python, combining deep technical expertise with strategic vision. Experienced in AI/ML integration, infrastructure modernization, and mentoring global teams to deliver customer-focused, scalable solutions. Open to principal-level roles that demand direct coding contributions alongside architectural leadership, driving innovation in distributed platforms, cloud infrastructure, and AI solutions.

**Core Competencies**

**- Cloud & Distributed Systems:** AWS (EC2, S3, Lambda, API Gateway), Kubernetes, Docker, Terraform, scalable microservices, high-availability architectures, CI/CD pipelines, fault tolerance  
**- Programming Languages:** C++, Go, Rust, Python, Perl, Bash  
**- AI/ML:** Generative AI, RAG, transformers (LoRA fine-tuning), PyTorch, TensorFlow, Hugging Face, LangChain, ONNX Runtime, distributed training, anomaly detection  
**- Systems Programming:** Linux/Windows kernel drivers (eBPF, KMDF/WDM, minifilters), file systems, performance tuning  
**- Databases & Storage:** PostgreSQL, MySQL, Redis, Cassandra, object storage systems  
**- Leadership & Strategy:** Technical strategy, agile execution, product ownership, cross-functional influence, mentoring (10+ years), roadmap planning, cost optimization  
**- Frontend & APIs:** React, Next.js, REST API design, rapid prototyping

**Professional Experience**

**Arcserve** (spun out from CA Technologies) — Greater Boston, MA  
**Technical Director, Software Engineering** | 2014–Present

- Directed technical strategy and architecture for multiple enterprise products (Replication & High Availability, OneXafe, CloudDirect) generating $20M+ annual revenue.

- Reduced delivery cycles by 40% through agile practices and direct coding contributions, enabling a Linux-based immutable object-store to ship 6 months earlier.

- Provided architectural guidance influencing 100+ engineering, QA, and support staff; directly managed teams of up to 10 engineers across geographies.

- Architected and coded components and features for high-availability replication, data deduplication, and agentless protection for AWS/Azure workloads, using C++ and Go.  
- Provided technical leadership for cloud-native and AI initiatives, reporting to CTO/VP, and influenced M&A projects through rapid prototyping.

- Developed and optimized transformer-based LLMs for edge inference with ONNX Runtime (for anomaly detection and agentic features), integrating RAG-based chatbots with legacy systems via REST and MCP protocols.

- Won multiple internal hackathons for AI/infrastructure prototypes, helping accelerate the innovation pipeline.

**CA Technologies (formerly Computer Associates)** — Greater Boston, MA  
**Principal Engineer** | 2006–2014

- Led post-acquisition integration of XOsoft’s replication technologies into CA’s enterprise portfolio.

- Designed and developed high-availability replication, deduplication, and backup features using C/C++ for Windows and Linux.

- Built a Unix/Linux build automation framework with web UI, reducing manual labor by 50%.

**XOsoft** *(Acquired by CA Technologies in 2006)* — Israel  
**Lead Software Engineer** | 2000–2006

- Designed and developed CDN components, including network management and monitoring tools, and high-traffic HTTP/FTP caching proxies, along with replication solutions.

- Led the development of kernel-mode drivers and file system modules in C/C++, improving system performance and reliability.

**Yandex** — Moscow, Russia  
**Software Engineer** | 1998–2000

- Developed high-traffic search, advertising network and web applications using C++ and Perl, optimizing performance for large-scale systems.

**Open-Source Projects/POCs**

- [s3stor](https://github.com/shvechkov/s3stor) – deduplicating archiving /backups into S3 compatible storage (Go) - [github.com/shvechkov/s3stor](https://github.com/shvechkov/s3stor)

- [gos3rve](https://github.com/shvechkov/gos3rve) – exposing local file systems via s3 APIs (Go) - [github.com/shvechkov/gos3rve](https://github.com/shvechkov/gos3rve)- [ufc](https://github.com/shvechkov/ufc) – fast unique file copy/ indexes and stores unique files (Rust) - [github.com/shvechkov/ufc](https://github.com/shvechkov/ufc)

**Education**

- M.Sc., Applied Mathematics | Institute of Telecommunications and Computer Science, Russia | 1996

- Machine Learning Specialization (Stanford Online) | 2024 ([Certificate](https://github.com/shvechkov/coursera_ml_ex/blob/main/completion_cert.png))  
- Holder of multiple [U.S. patents](https://patents.google.com/?q=(Alexey+Shvechkov)) in storage and infrastructure technologies