Nikolay **Lebedev**

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Summary

Emmy Award-winning engineering leader and problem solver with 10+ years building large-scale distributed systems and platforms, including 8+ years leading international teams across the US and EU. Pioneered advertising and CTV infrastructure, scaling ad tech, video streaming, data, and cloud-native services with billions in monetization impact. Patent holder in Free Ad-Supported Streaming Television (FAST) ad monetization platforms and PhD in Mathematics & Computer Science, blending expertise with business-driven innovation. Proven track record in aligning technical vision with strategy, fostering high-performing teams, and solving complex challenges at scale.

Core Competencies

Domain Expertise	AdTech & Monetization, SSAI, DAI, Header Bidding, OpenRTB, IAB Standards (VAST, VMAP, VPAID), Programmatic, CTV, Video Tech, HLS, MPEG-DASH, CMAF, Encoding & Streaming Workflows, Payments (Stripe, PayPal, Adyen)
Architecture Patterns	System Architecture, Microservices, Event-Driven Systems, Distributed Systems, REST, GraphQL
Data & AI	Data Pipelines (ETL, Real-Time Streaming), Apache Spark, Snowflake, Observability (Datadog, New Relic, CloudWatch, Prometheus), Machine Learning (TensorFlow, PyTorch), Computer Vision, Stable Diffusion, GenAI
Cloud & Infrastructure	AWS, GCP, Azure, Bare Metal, Confluent, Kubernetes, Docker, Terraform, CI/CD Pipelines, Infrastructure as Code
Databases & Storage	PostgreSQL, MySQL, Redis, MongoDB, DynamoDB, ElasticSearch, MSSQL, Aerospike
Systems & Networking	Linux/Unix, DNS, TCP, UDP, HTTP, gRPC
Languages	Go, Rust, TypeScript, JavaScript, Python, C# (.NET), Bash & CLI Tools
Leadership	Building & Scaling International Teams (US/EU), Managing Managers, Mentoring & Career Development, Hiring & Talent Development, Agile (Scrum, Kanban, SAFe 5.0), Cross-Functional Collaboration, Technical Strategy Alignment

Work Experience

Paramount · Senior Software Architect | *May 2025 – Present* · *New York, NY*

- Architected and led the company-wide monetization and ad platforms strategy, integrating subscriptions and payments in Paramount+, to support scalable global expansion.
- Introduced AI-driven automation for chargeback handling, cutting manual workload by 85% and reducing unaccounted revenue losses.
- Drove cost savings and operational efficiency by leading vendor selection, contract negotiations, and technical decision-making across all product lines.
- Defined and executed a long-term architecture roadmaps that improved platform reliability and supported sustained revenue growth.
- Optimized revenue performance through cross-functional initiatives integrating analytics, telemetry, and AI/ML-driven decisioning.

Paramount · **Pluto TV** · Principal Software Engineer | *Dec. 2024 – June 2025* · *Los Angeles, CA*

- Operated at director level; led architecture and scaling strategy for Pluto TV's proprietary Ad Platform, enabling high-performance ad delivery across multiple regions.
- Implemented event-driven solutions (Kafka, Confluent) and optimized microservices using Rust, cutting resource usage by 10% and reducing operating costs 5x during cloud migrations.
- Led and mentored 35+ senior engineers, leads and managers across 5 teams, establishing enterprise standards for observability, release automation, and code quality to support rapid, reliable delivery at scale.
- Increased ad yield and targeting accuracy through AI/ML optimization and advanced data pipelines, driving multi-billion-dollar revenue impact.

Paramount · **Pluto TV** · Engineering Manager, Ad Platform | *Feb. 2021 – Dec. 2024* · *Warsaw, Poland → Los Angeles, CA*

- Built and scaled 3 engineering teams (25+ engineers, 200% growth), evolving Pluto TV's Ad Platform into a global enterprise and primary monetization engine for Paramount Streaming.
- Reduced operational costs by 30% and drove monetization to over $1.6B annual revenue.
- Recognized with an Engineering & Technology Emmy Award for pioneering manifest-based playout for FAST (Free Ad-supported Streaming Television).
- Launched a dedicated data platform to measure KPIs, optimize ad targeting, and enable data-driven decision-making across Product, PMO, and Leadership with enhancements to platform performance, targeting accuracy, and ad yield through AI/ML intergrations, and telemetry analytics.
- Relocated to Warsaw as the first Pluto TV employee to establish the Streaming engineering department, later sponsored to Los Angeles to work onsite reporting directly to the VP of Engineering.

Pluto TV · Lead Software Engineer, Team Lead | *Sep. 2018 – Feb. 2021* · *Minsk, Belarus*

- Drove Ad Platform monetization from zero to over $1B total revenue, establishing Pluto TV as a competitive, profitable streaming service.
- Built and led Pluto TV's Ad Platform from the ground up as the first engineer, recruiting and managing a high-performing engineering team distributed across Belarus, Ukraine, Russia, and the EU.
- Architected and delivered the Ad Platform from scratch, enabling real-time ad serving, dynamic replacement, and revenue generation that contributed to Pluto TV's $340 million acquisition by ViacomCBS, later Paramount.
- Introduced microservices using Go, Rust, and Node.js; event-driven architecture with dedicated data pipelines, observability, and CI/CD to ensure scalability and reliability.
- Implemented IAB standards–compliant ad technologies (VAST, VMAP, OpenRTB) across CTV, mobile, and web, enabling programmatic and direct demand integrations.

ABC · Software Architect — *Feb. 2018 – Sep. 2018* · *Minsk, Belarus*

- Owned end-to-end architecture for a complex microservices platform powering payments, advertising, and health management, driving 45% revenue growth.
- Designed and implemented monetization services (Stripe and PayPal payments, VAST ad serving), delivering the MVP and establishing a foundation for scaling.
- Scaled engineering capacity from 15 to 70+ engineers by supervising multiple teams and aligning architecture with business objectives following successful MVP delivery.
- Established GCP infrastructure with CI/CD, observability, and data pipelines, improving reliability and enabling further budget expansion (Docker, K8s, NewRelic, CircleCI).

Verint · Lead Software Engineer, Team Lead — *Jan. 2018 – July 2018* · *Minsk, Belarus*

- Led development of core analytics and edge microservices for enterprise intelligence, enabling scalable, real-time data processing.
- Designed containerized, service-oriented architecture with observability (Prometheus, ELK), boosting system reliability and maintainability.
- Delivered AI-driven automation and reporting pipelines, accelerating insights and supporting data-driven decisions across cloud and on-prem deployments.
- Integrated new infrastructure with existing PostgreSQL, MongoDB, and Redis systems, ensuring seamless migration and driving global adoption.

MyHeritage · Lead Software Engineer, Technical Advisor — *Feb. 2018* · *Minsk, Belarus*

- Shaped key technical and product decisions on roadmap and architecture design, ensuring scalability and maintainability from the outset.
- Led end-to-end efforts in estimation, budgeting, and candidate selection, building a high performing core engineering team of 7 engineers from scratch.

Remeet · Co-founder — *Aug. 2017 – July 2018* · *Minsk, Belarus*

- Co-founded Remeet, a startup driving 10x more efficient video and messaging based team meetings, adopted by 6 client companies.
- Led the engineering team of 4, designing and building the platform from prototype to early stage production.
- Defined product vision and technical architecture, rapidly iterating to validate market fit and optimize team collaboration workflows.

Wolters Kluwer · **UpToDate** · Senior Software Engineer, Team Lead — *Aug. 2017 – Feb. 2018* · *Minsk, Belarus*

- Selected to develop a greenfield prototype for UpToDate, Wolters Kluwer's flagship clinical decision support tool; delivered a successful demo from scratch within one month, securing long-term budget and strategic backing.
- Hired and led a team of 7 engineers to develop core web components, backend services, and Amazon Web Services (AWS) infrastructure.
- Achieved frictionless operation of high-complexity clinical features at rapid scale for 3M+ users, enabling global adoption and platform growth.
- Implemented clinical decision algorithms with dynamic recalculations, improving responsiveness by 40% and accuracy of physician workflows.
- Designed microservices and serverless architecture (TypeScript, Node.js, Go, Python, AWS, Docker) with a custom CI/CD solution for rapid iterations.

Wolters Kluwer · **Bamboo** · Software Engineer — *July 2016 – Aug. 2017* · *Minsk, Belarus*

- Designed, built, and maintained an internal application framework and developer toolset (TypeScript, Node.js, Angular, AWS) adopted across multiple Wolters Kluwer products.
- Profiled and optimized product tech stacks, delivering over 40% cost savings and performance gains across framework iterations.
- Implemented CI/CD pipelines and platform architecture using AWS and Docker, ensuring reliable global deployments for 5M+ user accounts.
- Partnered with global product and engineering teams to drive adoption, establish coding best practices, and deliver demos to leadership.

WebVIKI · Software Engineer — *Nov. 2015 – July 2016* · *Minsk, Belarus*

- Developed and maintained a .NET Framework 4.5–based application framework using the Command pattern, Entity Framework, and MSSQL to support multiple product lines for Motorland, an industrial company.
- Developed infrastructure and deployment automation with Azure, optimizing delivery speed and reliability, reducing application startup times by 2.5x and resource usage by 25%.
- Built and delivered web applications on top of the framework, implementing business logic and front-end features.
- Refactored and optimized core framework code, improving performance, maintainability, and reducing technical debt across product lines.

Belhard · Associate Software Engineer — *Jan. 2015 – Nov. 2015* · *Minsk, Belarus*

- Developed and maintained B2C e-commerce platforms for multiple clients using Java and C#, delivering scalable backend logic and ensuring reliable operations.
- Reduced deployment errors by 30% and improved release reliability by implementing Jenkins delivery pipelines.
- Launched platform MVP, establishing a functional system that enabled early revenue generation and market entry.

Honors & Awards

2023	**Engineering & Technology Emmy Award Recipient**, Pioneering development of manifest-based playout for FAST (Free Ad-supported Streaming Television)	*Global*
2023	**Second Place Runner-Up**, Hackathon Ascent	*USA*
2023	**Community Winner**, Paramount Streaming	*USA*
2016	**International Round Winner**, Google Code Jam	*Global*

Publications & Patents

Patents

2025	**Inventor**, Storing and Retrieving Unused Advertisements (Updated Version)	*US12346938B2*
2023	**Inventor**, Storing and Retrieving Unused Advertisements	*US11593846B2*

Publications

2023	AdTech In a Nutshell: Understanding the Basics of Digital Advertising	*Paramount Streaming Blog*
2023	Exploring VAST and VMAP - Maximizing Ad Revenue	*Paramount Streaming Blog*
2019	Facefit Emotion Recognition Algorithm	*Google Scholar*
2016	Elements Of Automated Recognition Of Human Impressions By Image	*Google Scholar*
2015	Using Computer Technology in The Educational Process	*Google Scholar*

Education & Certifications

Belarusian State University *Minsk, Belarus*

- Ph.D. Coursework in Applied Mathematics and Computer Science, AI and Computer Vision, Discrete Math and Algorithms.
- M.S. in Applied Mathematics and Computer Science, Thesis: "Elements of Automated Human Emotion Recognition from Video"
- B.S. in Applied Mathematics and Computer Science, Awarded full-tuition merit scholarship.

Certifications

2024	Advanced Scrum Master	*SAFe*
2021	Leading SAFe 4.0 Agile Course	*SAFe*

Committees

Active Memberships

Committee Member & Contributor, The Interactive Advertising Bureau (IAB) *Global*

Member & Contributor, The Streaming Video Technology Alliance (SVTA) *USA*

Member & Standards Contributor, The Society of Cable Telecommunications Engineers (SCTE) *USA*