Dmytro Brazhnyk

Authorized to work in the US | +1 (484) 995-0689 | The Woodlands, TX | amid.ukr@gmail.com | LinkedIn

Senior Software Engineer

Award-winning professional with 20+ years of experience designing, modernizing, and scaling enterprise platforms across retail, financial services, telecommunications, aviation, cloud, and data-intensive environments.

Proven track record of leading large-scale distributed systems initiatives, driving cloud-native transformations, optimizing infrastructure investments, and delivering resilient platforms operating under extreme transaction volumes. Combines deep expertise in software architecture, backend engineering, cloud platforms, data systems, and technical leadership with proven success in translating complex business requirements into scalable technology solutions. Impressive history of reducing operational costs, improving platform reliability, accelerating modernization initiatives, and enabling enterprise growth through innovative engineering practices. Respected technical leader known for solving complex architectural challenges, training engineering teams, and advancing engineering excellence across global organizations. Skilled in delivering mission-critical technology programs in partnership with executive stakeholders, architects, engineering teams, and business groups.

Areas of Expertise

- Distributed Systems Engineering
- Backend Application Engineering
- Event-Driven System Architecture
- Enterprise Platform Modernization
- System Reliability & Resilience
- Data Platform Optimization
- Microservices Development
- Cloud-Native Solution Design
- Software Architecture Strategy
- DevOps & Continuous Delivery
- High-Volume Transaction Processing
- Multi-Cloud Infrastructure Oversight
- Scalability/Performance Engineering
- Technical Leadership & Mentorship
- IT Program Management & Execution

Key Highlights

- Brings **more than 20** years of progressive experience delivering enterprise software solutions, cloud-native platforms, distributed architectures, and modernization initiatives across global organizations and mission-critical environments.
- Reduced infrastructure and platform operating costs by **more than $1.16M** annually, including optimization initiatives that lowered expenses from **$960K to $48K** annually and **$260K to $10K** annually through architectural redesign.
- Architected and operated large-scale distributed systems supporting **150M+** daily updates, multi-terabyte datasets, and high-volume business operations requiring exceptional scalability, resiliency, and performance.
- Directed modernization and stabilization of mission-critical platforms processing **approximately 1M operations per second**, eliminating architectural bottlenecks and improving system reliability.
- Designed scalable cloud and data platform solutions leveraging Azure, AWS, GCP, Kubernetes, Kafka, CosmosDB, PostgreSQL, MongoDB, and event-driven architectures to support enterprise growth and operational excellence.

- Decreased architectural complexity across a critical platform encompassing **approximately 5,000 test scenarios**, improving maintainability, engineering efficiency, and long-term system sustainability.
- Built and expanded engineering organizations from **six to 50 developers**, strengthening delivery capabilities, technical standards, and cross-functional collaboration within large-scale development environments.
- Led architecture consulting, platform transformation, microservices adoption, and engineering enablement initiatives across organizations exceeding 20,000 engineers, influencing enterprise-wide technology strategy and best practices.
- Recognized among the **top 0.18%** nationally in the All-Ukrainian Olympiad programming competition, demonstrating exceptional analytical, problem-solving, and software engineering capabilities.
- Holds a Master's Degree in Computer Science with specialization in Artificial Intelligence, complemented by experience applying advanced engineering methodologies, automation practices, and emerging technologies to business challenges.

Professional Experience

STAFF SOFTWARE ENGINEER | WALMART.COM • REMOTE, USA • FEB 2024 – APR 2026

Provided technical leadership for the modernization and stabilization of a mission-critical retail platform supporting extreme transaction volumes and enterprise workflows. Managed architectural transformation initiatives across high-concurrency distributed systems, leveraging advanced engineering practices to improve platform reliability, scalability, maintainability, and development efficiency. Collaborated with engineering teams to modernize legacy components, strengthen system resilience, and establish sustainable foundations for long-term product evolution within a large-scale retail environment.

Key Accomplishments & Contributions:

- Restored stability across a high-volume retail platform processing **approximately 1M operations per second** by eliminating architectural bottlenecks and resolving critical concurrency challenges affecting a 2TB dataset.
- Re-engineered core platform architecture and introduced staged canary deployment practices, creating a more predictable development ecosystem that reduced technical risk and improved release quality.
- Expanded system visibility and accelerated modernization efforts by developing automated behavioral UML generation capabilities that enabled rapid legacy system discovery and architectural analysis.
- Improved software quality and validation coverage by developing an automated framework supporting **up to 5K** test scenarios, generating **nearly 2K** executable test cases, and covering **up to 70%** of functional system behaviors.

SENIOR SOFTWARE ENGINEER | PODS.COM • REMOTE, USA • MAY 2023 – FEB 2024

Architected and delivered a cloud-native enterprise data platform designed to provide secure, scalable, and highly available access to business-critical streaming data. Led solution design across application, security, infrastructure, networking, and deployment domains while supporting integration requirements within Microsoft Azure and Kubernetes environments. Drove platform scalability, resiliency, and security initiatives to support future business growth and operational continuity.

Key Accomplishments & Contributions:

- Delivered a greenfield cloud-native platform enabling enterprise REST-based access to Confluent Kafka data streams through a scalable Azure and Kubernetes-based architecture.
- Strengthened business continuity and service availability by designing cross-region redundancy and failover capabilities supporting resilient production operations.

- Enhanced enterprise security posture through execution of OAuth2 authentication, centralized secrets management, Azure Key Vault integration, secure network segmentation, and controlled service communication frameworks.
- Prevented scalability constraints commonly associated with large-scale CosmosDB implementations by applying proven distributed systems design patterns and optimized data-access strategies.
- Enabled stable production deployment by resolving complex integration challenges spanning Azure DevOps pipelines, AKS infrastructure, cloud networking, and application delivery components.

CHIEF SOFTWARE ARCHITECT | CARBO CERAMIC INC. • ON-SITE • JAN 2023 – MAY 2023

Led architecture assessment and cloud platform transformation initiatives focused on security, scalability, operational efficiency, and cost optimization. Served as a trusted advisor to executive stakeholders by evaluating technology investments, identifying strategic risks, and defining modernization priorities to support sustainable business growth/platform evolution.

Key Accomplishments & Contributions:

- Reduced annual platform and infrastructure expenditures from **approximately $260K to $10K**, generating significant cost savings through the elimination of unnecessary technology investments and cloud resource optimization.
- Identified critical security, scalability, and operational risks that could impact platform performance and business continuity.
- Delivered executive-level transformation roadmap and prioritized modernization strategy that established a foundation for future platform stability and technology governance.

STAFF SOFTWARE ENGINEER | WALMART (EPAM) • REMOTE, USA • APR 2020 – JAN 2023

Served as Architect and key engineering leader for the replacement of a large-scale legacy platform supporting critical business operations and extensive enterprise data processing requirements. Directed design and implementation of scalable distributed services, data modernization initiatives, operational monitoring frameworks, and cloud optimization strategies supporting one of the largest data environments within the organization.

Key Accomplishments & Contributions:

- Reduced annual CosmosDB processing expenses **from $960K to $48K** through comprehensive data-model redesign, auto-scaling implementation, and batch-processing optimization.
- Designed and operated a distributed platform processing **more than 150M** daily updates across a 3TB enterprise dataset, supporting real-time operational requirements and predictable high-volume processing cycles.
- Lowered infrastructure expenditures by **10x** through cloud resource optimization, intelligent scaling strategies, and performance-focused architectural improvements.
- Modernized legacy platform architecture by implementing scalable service-based solutions that improved data quality, operational reliability, and long-term maintainability.

SENIOR SOFTWARE ENGINEER | ANADARKO (EPAM) • ON-SITE, USA • MAR 2019 – APR 2020

Contributed to the modernization of an enterprise IoT platform by strengthening security architecture, enhancing messaging capabilities, improving operational reliability, and optimizing real-time data processing. Collaborated with engineering teams to address complex system constraints, eliminate recurring operational issues, and improve platform responsiveness.

Key Accomplishments & Contributions:

- Improved enterprise security controls by extending a microservices framework with OAuth-based authentication and Azure Active Directory integration, strengthening access governance across distributed applications.
- Identified/addressed critical vulnerabilities within Microsoft OAuth SDK implementations, reducing security exposure.
- Eliminated a long-standing connection pool issue that recovered **up to 20 hours of engineering productivity per month** and improved overall operational efficiency.
- Achieved real-time processing performance of **less than five minutes**, replacing multi-hour delays and significantly improving responsiveness across the IoT ecosystem.
- Enhanced messaging reliability through re-architecture of RabbitMQ integrations utilizing dead-letter queues, priority processing, and fault-tolerant communication patterns.
- Maintained long-term production stability with **zero downtime** while reducing recurring incident escalations through implementation of proactive monitoring and data-quality controls.

SOLUTION ARCHITECT (CONSULTING ENGAGEMENT) | VANGUARD (EPAM) • ON-SITE • SEP 2018 – MAR 2019

Provided architecture consulting and transformation leadership for the modernization of a large-scale enterprise platform. Evaluated scalability limitations, defined future-state architecture strategies, and guided incremental modernization initiatives that improved platform flexibility, scalability, and long-term maintainability. Partnered closely with business and technical stakeholders to establish a practical roadmap for enterprise evolution.

Key Accomplishments & Contributions:

- Identified critical scalability constraints within a GemFire-based environment and recommended architectural alternatives capable of supporting future growth requirements.
- Led transition strategy toward a scalable PostgreSQL, MongoDB, and Redis architecture, validating design effectiveness through successful production pilot deployment.
- Established domain boundaries, service decomposition strategies, and business-aligned architecture principles that enabled parallel development and accelerated delivery execution.
- Delivered the first production implementation utilizing the Strangler modernization pattern, allowing incremental migration from legacy architecture without disrupting business operations.
- Designed and directed modularization initiatives utilizing OSGi within Eclipse RCP, enabling independent release cycles, greater development flexibility, and improved team autonomy.

SOLUTION ARCHITECT | EPAM – COMPETENCY CENTER • MULTIPLE EUROPEAN LOCATIONS • APR 2016 – SEP 2018

Served as architecture advisor, trainer, and engineering transformation leader supporting enterprise-wide modernization initiatives across a global technology organization. Delivered architecture consulting engagements, established engineering standards, and guided adoption of modern software engineering practices while partnering directly with development teams across multiple countries and business units.

Key Accomplishments & Contributions:

- Influenced engineering excellence initiatives across an organization comprising **more than 20K engineers** through architecture training, consulting engagements, and modernization leadership.
- Established architecture standards, governance frameworks, engineering guidelines, and reusable best practices that improved consistency across multiple development organizations.

- Designed versioning, deployment, and release-management strategies supporting scalable microservices adoption and long-term platform sustainability.
- Accelerated enterprise modernization efforts by leading the adoption of microservices architecture and service-oriented engineering principles across numerous delivery teams.
- Developed reference architectures, reusable solution frameworks, and implementation accelerators that strengthened both client delivery capabilities and pre-sales engagements.

Early Career Experience

LEAD SOFTWARE ENGINEER | DATALEX (EPAM) • DISTRIBUTED MULTI-LOCATION ENGINEERING TEAM

LEAD SOFTWARE ENGINEER | EPAM

LEAD SOFTWARE ENGINEER | DEMANDWARE (ASTOUND COMMERCE)

SENIOR SOFTWARE ENGINEER | TEAMDEV

JAVA SOFTWARE ENGINEER | SOFTLINE

Education & Certification

Master of Science in Computer Science (Artificial Intelligence Specialization)
Kharkiv National University of Radio Electronics | Ukraine | 2017

Completed graduate studies concurrently while serving in a full-time Solution Architect capacity, demonstrating exceptional commitment to advanced technical education and professional development.

Bachelor of Science in Computer Science
Kharkiv National University of Radio Electronics | Ukraine | 2009

Awards

Ranked within the Top 0.18% nationally in the prestigious All-Ukrainian Olympiad Programming Competition, a government-sponsored algorithmic and computer science competition.

Earned repeated recognition as a top performer in regional and national programming competitions from 2001 through 2005, demonstrating exceptional analytical thinking and software engineering aptitude.

Led development team to victory in the Quantum Game Hackathon, successfully delivering an award-winning solution through innovation, collaboration, and technical execution in 2014.

Technical Skills

Programming Languages: Java, Kotlin, Groovy, TypeScript, Python, Rust

Streaming & Messaging: Apache Kafka, RabbitMQ, Event Streaming Platforms

Data & Storage Technologies: CosmosDB, PostgreSQL, MongoDB, Redis, Elasticsearch

Backend Engineering: Spring Boot, RESTful APIs, Enterprise Application Development

Data Engineering & Analytics: Apache Spark, Large-Scale Data Processing, Multi-Terabyte Data Platforms

Cloud Platforms: Microsoft Azure, Amazon Web Services (AWS), Google Cloud Platform (GCP), Kubernetes

DevOps & Automation: Terraform, Helm, Jenkins, Git, CI/CD Pipeline Development, Infrastructure Automation

Observability & Monitoring: Prometheus, Grafana, ELK Stack, Splunk, Real-Time Monitoring, SLA Management

AI-Augmented Engineering: LLM-Assisted Code Review, Technical Documentation, Knowledge-Base Navigation

Quality Engineering: Test Automation, Unit Testing, Test-Driven Development (TDD), Automated Validation Frameworks

Artificial Intelligence/Machine Learning: TensorFlow (Keras), PyTorch, Jupyter, Computer Vision, AI-Augmented Engineering