

# Dmytro Brazhnyk

Solution Architect/Principal Software Engineer

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The Woodlands, TX

Results-driven expert with almost 20 years of experience and a strong background in developing robust and scalable software solutions. Demonstrated expertise in full-stack development, including frontend, backend, and database technologies. Skilled in agile methodologies and cross-functional collaboration to deliver high-quality products. Deep understanding of software engineering principles, algorithms, and data structures. Strong problem-solving abilities and a passion for staying up-to-date with emerging technologies. Committed to delivering excellence through clean code, best practices, and continuous learning to drive business success.

## Technical Proficiencies

<b>Languages</b>	Advanced knowledge in Java, JavaScript, TypeScript, and Kotlin. Basic knowledge of C++, Rust Lang, Native, x86, .NET, Scala, and Python. Formats: JSON, XML, YAML, etc.
<b>Data Architecture:</b>	RDBMS DBA, specifically PostgreSQL. Experienced in NoSQL data modeling and optimization (particularly Cosmos DB), Oracle, MySQL, SQL Server, MS SQL, MongoDB, Cassandra, Elastic Search, Redis, Gemfire. Spark. ETL Talend, Azure Data Factory.
<b>Cloud Architecture:</b>	Certified AWS SA Architect. Experience with Azure. Advanced experience with Kubernetes, etc. Azure Blob, AWS S3, AWS DynamoDB, Azure Databricks, AWS EC2, Azure AKS, AWS SQS. Docker. PaaS, Pivotal Cloud Foundry, AWS Lambda, Heroku, 12 factor application.
<b>Front-End Architecture:</b>	Swing, ReactJS, Angular, TypeScript, WebRTC, WebGL and WebSocket.
<b>Back-end Architecture:</b>	Spring Boot, Struts MVC, Spring MVC, Spring Data, Hibernate, JPA, MyBatis, J2EE, JAX-RS, sl4j, JDBC, REST API, Swagger, GraphQL, ProtoBuf(gRPC), SOAP, Camel ESB, Junit, Mockito, EasyMock,
<b>Microservices</b>	Spring Boot Cloud, Kubernetes, Docker, Linkerd, Istio
<b>CI/CD/IaaC:</b>	Jenkins, Helm, Terraform, SonarQube, Fortify, Git, GitHub, GitLab, BitBucket, SVN, Mercurial
<b>System Monitoring:</b>	ELK(ElasticSearch/Logstash/Kibana), Grafana/Prometheus, Splunk
<b>Cyber Security:</b>	JWT/JWE, SAML, OAUTH, OWASP TOP 10, CVE SCANS, X509, mTLS, Cloud Security, Azure WAF, Azure Defender
<b>AI, DataScience</b>	Jupyter, TensorFlow(Keras Model, ANN/CNN/RNN/LTSM, OpticalFlow), Google Colab

# Career Experience

## **Walmart.com**

Software Backed Engineer (Contractor)

Technology: MicroServices, Spring Cloud(Kotlin), Yugabyte, AlloyDB, Walmart Cloud Native Platform, PySpark, Google Cloud Storage, Kubernetes, Python.

**Feb 2024 - Now**

Led the complete re-engineering of a mission-critical, high-load retail service, rebuilding it from scratch and delivering a stable, production-ready solution that resolved long-standing legacy issues.

### **Key Achievements:**

- Directed discovery and effort estimation for re-engineering a core Walmart internal service.
- Rebuilt functional requirements through extensive static code analysis of the legacy system.
- Created custom automation tools to generate behavioral UML diagrams directly from source code.
- Introduced advanced automated testing techniques, including:
  - **Permutation-based test generator** producing ~5,000 test cases, covering ~70% of business functional behaviors and edge cases
  - Automated extraction of ~2,000 prioritized use cases, now the primary source of system documentation.
- Reimplemented the core service with a modern architecture and released it through staged canary deployments.
  - Eliminated critical legacy defects and delivered full functional parity with consistent behavior across all edge cases.

### **Ongoing Work:**

- Continuing to evolve the re-engineered platform, completing remaining modernization milestones and validating the flexibility and scalability of the new design.

## **Pods.com**

**May 2023 - Feb 2024**

Azure Architect/Cloud Developer

Technology: MicroServices, Spring Cloud(Kotlin), Azure CosmosDB, Azure Blob Storage, Azure Data Factory, CosmosDB, Azure AKS(Kubernetes), Helm, Python, Rust, Azure Application Gateway, Azure Front Door, Azure API Management, Azure WAV, Azure Key Value, Azure Kubelete CSI Driver, Azure DevOps, Azure Pipelines, Kafka Confluent Cloud Platform, MicroServices, REST, JSON, Agile, Scrum, git, GitHub,

### **6-month contract to build a new microservices platform with a REST API front-end on Confluent Kafka Cloud**

- Led the discovery phase, gathering and clarifying functional and technical requirements.
- Proposed the system architecture and technology stack for a new microservices platform leveraging Java and Azure cloud services.
- Directed implementation and delivered all scope items on schedule, fully aligned with the proposed design.
- Collaborated closely with DevOps teams to troubleshoot Azure DevOps pipelines, Kubernetes integration issues, Azure platform constraints, and web security concerns.
- Produced comprehensive documentation for DevOps teams to support ongoing maintenance and future platform extensions.

## **Carbo Ceramic Inc/StrateGen**

**Jan 2023 - May 2023**

Chief Architect

Technology: MicroServices, Spring Cloud(Kotlin), Azure CosmosDB, Azure Blob Storage, Azure Insight, Apache Kafka, CosmosDB, Kubernetes, Python, Spark, PySpark, Jupyter, Vault, Consul, Grafana, Prometheus, Splunk. Azure DataBrik, Docker, Kubernetes, Azure AKS, HELM, Terraform, MicroServices, REST, JSON, Agile, Scrum, git, GitHub, Jenkins, Azure Data Factory

Directed project discovery, collaborating with stakeholders to identify key opportunities, leading a team of 15 engineers. Conducted a thorough software architecture review, uncovering critical risks jeopardizing data security and privacy. Negotiated budget allocation based on risk assessment and company

constraints. Addressed concerns and quality attributes in the roadmap: DR/BCP, security, availability, reliability, performance, and usability.

- Saved \$60K a year - by reviewing cloud resource utilization and down-scaling allocated capacity.
- Saved \$200k/year in enterprise software costs by proposing cost-effective MicroServices and Cloud Native solutions.
- Presented findings to the CEO, prioritized risks, and created a proactive roadmap for long-term stability.
- Made impactful technical decisions: enhanced cloud security, implemented best practices, and executed data migration from SQL Server to MongoDB.

### **EPAM - Walmart**

**Apr 2020 - Jan 2023**

Key Engineer/Architect

Technology: Spring Cloud (Kotlin), Azure CosmosDB, Azure Blob Storage, Apache Kafka, CosmosDB, Kuberntes, Spark (PySpark/Jupyter), Vault, Consul, Grafana/Prometheus, Splunk

Joined as the Architect/Key Engineer, driving the replacement of legacy software with highly scalable and reliable services. Managed a colossal 3TB database, effortlessly processing 150 million daily updates, including rapid spikes within 30-60 minutes. Enforced exceptional data quality in this mission-critical system, handling massive data volumes.

- Reduced the cost of CosmosDB processing from \$960 000 a year to \$48000 a year, by introducing a set of practices like auto-scaling, scale scheduling, batch processing, and doing proper data modeling.
- Spearheaded the implementation of groundbreaking services from scratch, leading the team to success.
- Pioneered a service prototype for seamless team-wide adoption.
- Orchestrated end-to-end solutions, meticulously overseeing project deployment and maintenance.
- Successfully deployed and managed an entire service cluster, flawlessly handling the massive load of 150 million daily updates.
- Slashed hardware costs by a staggering 10x, leveraging auto-scaling and optimizing data modeling during idle database periods.
- Enforced top-notch coding practices like TDD and Peer-review.
- Crafted an unyielding service framework, effectively separating business code from infrastructure intricacies.
- Established real-time monitoring, ensured NFR compliance, and implemented rigorous quality processes, impressing stakeholders with system stability.
- Implemented meticulous data quality processes, guaranteeing system reliability and proactive monitoring.
- Authored impactful technical documentation, comprehensive architecture documents, and insightful business analysis.

### **EPAM - Anadarko**

**Mar 2019 - Apr 2020**

Tech Lead/Architect

Technology: Spring Boot, RabbitMQ, Azure Cloud, Kubernetes(GKE), Helm, SQL Server, MS SQL(Analytics engine), MongoDB, ELK, ElasticSearch, Kibana, LogStash, IoT/Witsml., Docker, Kubernetes, Azure Active Directory, OAUTH, JWT, TypeScript, Angular, HELM, Terraform, MicroServices, REST, JSON, Agile, Scrum, Spring Data, Hibernate, JPA, JDBC

Extended Microservice framework with OAuth support for authentication/authorization. Re-architected a core component in the IoT system to enhance reliability.

- Developed an extension to integrate services with Microsoft Azure AD and OAuth in the Company Java framework.
- Identified critical vulnerabilities in the open-source Microsoft OAuth SDK.

- Resolved a year-long issue with the Connection Pool setup, saving 20 hours per month.
- Optimized interaction with MS SQL Database through batch processing and query rewriting.
- Achieved real-time SLA of <5 minutes, eliminating lag times of hours or days.
- Implemented system metric monitoring, alerts, and presented KPI improvements to stakeholders.
- Reworked application integration with RabbitMQ, introducing architecture patterns like DeadQueue and Priority pools.
- Improved integration with 3rd-party service through client-side throttling, ensuring stability.
- Ensured months of system stability without downtime, eliminating daily server downs.
- Enhanced application core/thread/pod scalability.
- Improved application processing reliability and introduced real-time monitoring of data quality.
- Optimized data gap analysis for better performance.

### **EPAM - Vanguard**

Solution Architect

**Sep 2018 - Mar 2019**

Technology: Pivotal Cloud Foundry, Gemfire (IMDG), Spring Stack, J2EE, Fortify(SAST). AWS EC2, AWS S3, REDIS, AWS DynamoDB, AWS Lambda, MicroServices, REST, JSON, GraphQL, Agile, Scrum, React, JAX-RS

Led Vanguard's digital transformation. Developed a comprehensive plan and roadmap for migrating existing Monolithic applications into Microservices.

- Led a team to prototype a new Microservices-based platform for future migration.
- Successfully sliced the first set of Monolith into Microservices under the team's leadership.
- Resolved critical performance and reliability issues.

### **EPAM - Competency Center, Ukraine**

**Apr 2016 - Sep 2018**

Solution Architect

Technology: Kubernetes, Spinnaker, Spring Boot/Spring Cloud, MicroServices, REST, JSON, Docker Swarm, Spring Boot Cloud, MicroServices, REST, JSON, Git, GitLab, Hibernate, Spring Data, JPA, AWS Lambda

Participated in EPAM's Java Competence team, conducting R&D for Microservice Accelerator and security for a large organization of 20,000 employees. Conducted research and analysis on Zero-Down-Time deployment approach using Spinnaker, optimizing the application deployment process. Conducted in-depth research on best practices for transforming monolithic applications into microservices, informing strategic decision-making for future projects.

- Designed Versioning and Release strategy for the Microservices Reference Application.
- Led security training sessions for EPAM's customers, equipping them with the necessary skills to protect their systems and data.
- Implemented Spring Boot Cloud, RabbitMQ, and Docker (Docker Swarm) technologies, leveraging their benefits for efficient and scalable microservices architecture.
- Spearheaded the development of Microservice expertise within the organization, initiating and driving the adoption of microservices architecture.

### **EPAM - Datalex, Ukraine**

**Apr 2016 - Sep 2018**

Scrum Master/Development Lead

Technology: Java, JBoss/EJB, Oracle, Struts, REST, JSON, Agile, Scrum, BitBucket, Git, Jenkins, JDBC

Re-architected a heavily over-engineered EJB/JBoss monolith system, 10 years old with 400 engineers constantly pushing to the same repository and supporting 50 customizations for different customers.

- Built a core team of six developers in the Kharkiv office and scaled up to 50 people.
- Contributed towards team execution of two impactful releases for COPA and JetBlue airlines, delivering valuable solutions and driving positive outcomes for both organizations.
- Developed training space and documentation for newcomers.
- Established Agile process for distributed L3 Support and served as Scrum Master.

## **Additional Experience**

Tech Lead, EPAM – True Trade Forex Trading, Ukraine  
Tech Lead, EPAM – Copyright Clearance Center, Ukraine  
Lead Software Engineer, Team/Astound Commerce – Demandware, Ukraine  
Senior Software Engineer, TeamDev – Itrain SalonBiz, Ukraine  
Java Engineer, TeamDev – ComfyJ/Jexcel, Ukraine  
Java Swing Engineer, TeamDev – Rosettabio Syllego, Ukraine  
Java Engineer, Softline, Ukraine

## **Education**

Master's degree in Artificial Intelligence  
Kharkiv National University of Radio Electronics, Ukraine, 2017  
Bachelor's degree in Computer Science  
Kharkiv National University of Radio Electronics, Ukraine, 2009

## **Awards**

2014 - Hackathon - best computer game award for Quantum game (Led a team to success)  
(<https://dou.ua/forums/topic/12828/>)  
2005 - 3 place(bronze) award in All-Ukrainian Student Olympiad in the discipline "Informatics" in the category of computer science. <https://zakon.rada.gov.ua/rada/show/v0518290-05#Text>. (Ukraine is a country of 50 million of the population with many famous people born there like Sikorsky or Korolev)  
2003 - 1st place award in regional Olympiad for 11th school grade.  
2003 - Selected as the top 15 best in Kharkiv Oblast Olympiad before the All-Ukraine stage.  
2002 - 1st place award in regional Olympiad for 10th school grade.  
2001 - 3rd place award in regional Olympiad for 9th school grade.

## **Training & Certifications**

2023 - TensorFlow and Machine Learning Udemy online courses  
2019 - CloudFroundry on edX  
2018 - Certified AWS Solution Architect  
2018 - AWS Solution Architect Udemy online courses  
2018 - EPAM Software Architecture School training  
2011 - Demandware ecomm training

***References: The List of Hobby Projects will be provided on request.***