

DMYTRO YEMELIANOV

Senior Software Engineer | Rust, Backend, Data and Platform Integrations

Vinnytsia, Ukraine | Europe/Kyiv | Remote | dyemelianov@icloud.com | +380 96 153 6412
linkedin.com/in/dmytro-yemelianov | github.com/dmytro-yemelianov

PROFILE

Senior engineer with 15+ years across backend and platform development, data engineering, DevOps, and industrial software integrations. Recent work focuses on production Rust, WebAssembly, cloud API platforms, developer tooling, and AI-assisted automation. Background includes 10+ years in Autodesk CAD/PDM/PLM workflows, enterprise integrations, high-load data systems, and software connected to physical processes. Autodesk Expert Elite, ADN participant since 2012, and published technical author.

CORE CAPABILITIES

Backend and systems: Rust, Python, C#/.NET, TypeScript/JavaScript; async services, REST APIs, OAuth, integration layers, developer tooling, typed contracts, WebAssembly.

Cloud, data and operations: Cloudflare Workers/D1/KV/R2/Durable Objects, Azure, AWS, Docker, Kubernetes, Kafka, SQL/ETL, CI/CD, monitoring, retries, rate limiting, and production support.

Industrial and AI: Autodesk APS/ACC, CAD/PDM/PLM automation, machine toolpaths, LLM/MCP integrations, deterministic guardrails, computer vision, GPU and embedded systems.

PROFESSIONAL EXPERIENCE

Independent Senior Software Engineer / Platform Architect - Self-directed and contract work | Remote Apr 2026 - Present

- **RAPS and Barvinca:** built an open-source Rust platform spanning 16 Autodesk APIs and 230+ commands, then used it to power a hosted ACC/BIM 360 administration product. Wrote the Barvinca API Worker in Rust, compiled it to WebAssembly for Cloudflare, and implemented OAuth, concurrent operations, retries, rate limiting, dry-run previews, progress tracking, and audit-ready results.
- **Dry:** created an independent clean-room Rust toolpath engine inspired by FullControl. Designed a typed, units-aware multi-level IR with lowering, simulation, verification, optimization, and emission for FFF/CNC/laser/robot workflows; delivered native, WASM, Python, and TypeScript interfaces.
- **RustyTracker:** rewriting MilkyTracker's C++ core in Rust using a test-first approach: typed module data, XM/MOD parsing, editing, playback, offline audio rendering, a WASM browser engine, and deterministic JSON tooling.
- **Muon:** developed an AutoCAD .NET plugin with a Python sidecar for standards-compliant FTTH permit and construction drawing automation.

[RAPS](#) | [Barvinca](#) | [Dry live](#) | [RustyTracker](#)

Senior Developer / DevOps / Cloud Operations - Sitecore | Ukraine, Malaysia and Remote

Feb 2019 - Apr 2026

- Led CI/CD and release automation with TeamCity and Azure DevOps; developed reusable .NET and PowerShell platform components for global infrastructure.
- Developed and supported a ServiceNow-based self-service support portal, REST integrations, JavaScript enhancements, and customer-facing workflows.
- Managed cloud deployments and ETL workloads; integrated telemetry and monitoring with Grafana, ELK, and Power BI; worked with Kafka, Kubernetes, Docker, and automated testing.

EARLIER EXPERIENCE

ETL Developer - Ciklum | Dnipro, Ukraine

Aug 2017 - Jan 2019

- Developed SQL Server Integration Services pipelines, data services, CI/CD automation, and technical documentation.

Software Developer - AMC Bridge | Dnipro, Ukraine

Aug 2015 - Jul 2017

- Built database and Microsoft BI functionality for cost-modelling software; supported PDM customers and advised R&D teams on CAD/PDM integrations.

EARLIER EXPERIENCE - CONTINUED

Draft Designer / System Administrator - Hydrotech-Engineering | Dnipro, Ukraine

Feb 2012 - Aug 2015

- Led CAD/PDM/PLM implementation, facility design workflows, content libraries, and internal engineering tooling.

Draft Designer - RIM 2000 | Dnipro, Ukraine

Aug 2008 - Feb 2012

- Produced standards-based engineering documentation, designed a document management system, and coordinated technical requirements with clients.

SELECTED RUST SYSTEMS

- **RAPS:** multi-crate Rust platform, CLI, MCP server, cloud/WASM worker, parallel batch operations, resumable transfers, API schemas, and cross-platform distribution.
- **Dry:** compiler-style IR and deterministic processing pipeline for machine motion with native/WASM parity and multi-language SDKs.
- **RustyTracker:** behavioral rewrite of a legacy C++ audio system with typed state, binary formats, golden tests, offline rendering, and WASM.
- **QSOE OS handover:** partial C-to-Rust migration of a QNX-inspired RTOS in a RISC-V context.

[QSOE Rust handover](#) | [Full GitHub profile](#)

EDUCATION AND CREDENTIALS

- **Master's Degree in Computer Science** - Dnipropetrovsk National University, 2008.
- **Autodesk Expert Elite;** Autodesk Developer Network participant since 2012; Autodesk University speaker.
- Author, *Autodesk Vault Programmer's Cookbook*, Packt Publishing; published Autodesk App Store tools and Vault training courses.

TECHNOLOGY

Languages: Rust, Python, C#/.NET, TypeScript/JavaScript, PowerShell, SQL. **Cloud and platform:** Cloudflare Workers, D1, KV, R2, Durable Objects, Azure, AWS, Docker, Kubernetes, TeamCity, Azure DevOps. **Data:** Kafka, PostgreSQL, SQL Server, MySQL, Cosmos DB, Neo4j, SSIS/ETL. **Observability:** Grafana, ELK, Power BI. **Systems:** WebAssembly, RISC-V/RTOS, ESP32/Arduino, OpenGL/WebGL/Vulkan, GPU compute.