



DZMITRY RYBAKOU

LEAD SOFTWARE ENGINEER

SUMMARY

Software engineer with 4+ years of commercial experience in backend development using Rust, TypeScript, and C#, and now specializing in mobile application development with Flutter.

I am highly sociable and thrive in teamwork environments. My experience in fast-paced settings has made me adaptable, skilled at prioritizing tasks, and capable of meeting deadlines under pressure. As a dedicated team player, I excel in both contributing my own ideas and actively listening to others. Currently, I am actively exploring exciting career opportunities and am open to new challenges and projects.

LANGUAGES

- English (B2)
- German (B1)
- Russian (Native)
- Belarussian (Native)

DOMAINS

- Blockchain
- Fintech
- Algorithmic Trading
- DeFi/Web3
- E-Learning
- E-commerce
- Retailing
- Gaming
- AI / Automation

CONTACTS

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PROFESSIONAL ACTIVITY (PROJECTS)

AUTOMATED AI TRADING PLATFORM | FULL-STACK ENGINEER

From September 2025 to present

Description: Built from scratch a fully automated, AI-driven algorithmic trading platform targeting US equity markets (NYSE, NASDAQ) via Alpaca Markets, designed for 24/7 autonomous operation.

Responsibilities & Achievements:

- Architected the entire system from ground up: multi-agent AI pipeline (LangChain + MCP) for signal generation, integrated with Alpaca Markets API for real-time data streaming and order execution.
- Developed a multi-source data aggregation layer collecting signals from Twitter/X, financial news feeds, and market data providers; processed via NLP pipeline for autonomous trading decisions.
- Built a Telegram Bot interface for live P&L monitoring, position management and emergency kill-switch; risk module with drawdown limits and circuit breakers.
- Full observability stack (InfluxDB + Grafana), Dockerized infrastructure with CI/CD for zero-downtime deployments.

Environment: Python, TypeScript, LangChain, MCP, Alpaca Trade API, Telegram Bot API, PostgreSQL, Redis, InfluxDB, Grafana, Docker, GitHub Actions.

DIGITAL WALLET & DOCUMENT HOLDER | FULL-STACK ENGINEER

From April 2025 to present

Description: A secure cross-platform application for managing digital cards, identity documents, and sensitive data with a focus on privacy and high performance.

Responsibilities & Achievements:

- Developed core logic using Rust for high-performance backend processing and cross-platform shared logic, ensuring memory safety and speed.
- Implemented native iOS (Swift) and Android (Kotlin) integrations to leverage platform-specific security features (Biometrics, Secure Enclave, Keystore).
- Built a flexible UI that handles complex document templates and dynamic data visualization across mobile and desktop-ready layouts.
- Optimized data persistence and offline-first capabilities using local encrypted databases.

Environment: Flutter/Dart, Swift, Kotlin, Rust, PostgreSQL, Docker, CI/CD, Biometric API, Secure Storage.

VPN PROVIDER | SOFTWARE ENGINEER

From September 2025 to January 2026

Description: Developed a high-performance VPN client for Windows, macOS, iOS, and Android.

Responsibilities & Achievements:

- Engineered a robust desktop experience using Flutter Desktop, implementing system tray integration and window management for macOS/Windows.
- Developed low-level platform channels to communicate with network drivers and manage secure tunnel protocols.
- Integrated secure storage for user credentials and automated background updates.
- Managed the full deployment cycle, including code signing for Windows/macOS and distribution via official stores.

Environment: Flutter, Dart, System Tray API, GitHub Actions (CI/CD).

SKILLS

Programming languages:

- Rust
- C#
- SQL
- TypeScript/JavaScript
- Dart
- HTML/CSS

Blockchain development stack:

- Substrate
- Solidity
- Ethereum
- Hardhat
- ERC1155 / ERC721 / ERC20
- DeFi Protocols
- Web3
- Smart contracts
- Solana

Programming technologies:

- Actix Web
- Rocket
- Diesel
- SQLx
- Tokio
- ring
- reqwest
- .NET
- RabbitMQ
- Ocelot
- Flutter
- Docker
- CI/CD
- Consul
- mockall
- redis-rs

Databases:

- MongoDB
- MS SQL Server
- MySQL
- Redis
- PostgreSQL
- OracleDB

FILE STORAGE BLOCKCHAIN | TECHNICAL LEAD

From June 2024 to September 2025

Description: A custom L1 blockchain solution, built on the Substrate framework, focused on the secure storage of game files and data. The project includes smart contract support via Solidity, as well as an indexing layer in TypeScript for blockchain interactions. This solution was designed to handle large-scale data storage efficiently and securely, ensuring reliability for gaming platforms and users.

Responsibilities & Achievements:

- Led the design and development of a custom L1 blockchain for decentralized file and game data storage, built using Substrate;
- Developed a custom blockchain indexer using TypeScript, which facilitated real-time data analysis and monitoring;
- Architected and managed the overall system design, including a robust data storage mechanism on the blockchain;
- Acted as the technical lead, overseeing a cross-functional team and ensuring the successful delivery of all key components;
- Implemented efficient CI/CD pipelines, Docker-based infrastructure, and ensured performance scalability through optimized blockchain interactions.

Environment: Rust, Substrate, Solidity, TypeScript, Docker, Actix Web, EVM, Grafana, InfluxDB, CI/CD, Linux CLI, Jira, Confluence, Azure, Git, Redis.

CUSTOM BLOCKCHAIN SOLUTION | TECHNICAL LEAD

From May 2023 To July 2024

Description: Custom L1 blockchain ecosystem meticulously constructed on the Substrate framework, featuring a network of versatile parachains, including EVM compatibility. This platform is designed for compliance management in the FinTech sector, powered by LLaMa2 (Legally Leveraged Managed Modules) for comprehensive and efficient compliance checks.

Responsibilities & Achievements:

- Designed, developed, and maintained a custom L1 blockchain ecosystem utilizing the Substrate framework. Successfully integrated multiple EVM-compatible parachains to enhance interoperability and scalability;
- Spearheaded the implementation and management of compliance modules powered by LLaMa2. Ensured seamless compliance checks and adherence to regulatory requirements;
- Collaborated effectively with cross-functional teams, including product managers, designers, and fellow developers. Contributed to the design and delivery of cutting-edge blockchain-based solutions, fostering a collaborative and innovative environment;
- Established and managed a decentralized governance system -

Environment: Rust, Substrate, Docker, Actix Web, Tokio, CI/CD, Flutter, MongoDB, Ethereum, Jira, Confluence, Azure Pipeline, Redis, Bitbucket, Dart, Linux CLI, Docker.

BLOCKCHAIN-ENHANCED DOCUMENT VERIFICATION AND MANAGEMENT SYSTEM | SOFTWARE ENGINEER

From January 2022 To July 2023

Description: An information system for ensuring the authenticity and integrity of documents in various sectors, based on blockchain technology, the main purpose of which is to simplify document management, including verification, storage and accessibility. Provides a solution for a range of industries including legal, real estate, academic institutions and more.

Responsibilities & Achievements:

- Led the development team in launching a customized blockchain system, providing a secure foundation for document management and verification;
- Created a suite of smart contracts that efficiently managed document transactions and access control, contributing to a streamlined document management process;
- Successfully designed and implemented the document verification mechanism, offering users a reliable method to validate the authenticity of documents, improving trust and reducing fraud;
- Successfully completed the rewrite of the designated part of the application, resulting in improved performance and functionality;
- Collaborated in the development of intuitive web and mobile interfaces, resulting in a user-friendly experience for document upload, verification, and sharing.

Environment: Rust, Substrate, Web3, Tokio, Azure, Smart contracts, Jira, Confluence, TypeScript, Ethereum, Linux CLI, GitHub, Docker.

Cloud technologies:

- Azure DevOps
- Azure Logic Apps
- Azure Key Vault
- Azure SQL
- Azure Blob Storage
- Azure App Service
- Azure Cosmos DB
- Azure Functions
- Azure Pipeline

Programming methodologies:

- Scrum
- Agile

Source Control Systems:

- Git
- Azure Repos
- GitHub
- BitBucket

DECENTRALIZED FINANCIAL ECOSYSTEM (DFE) | SOFTWARE ENGINEER

From July 2021 To January 2022

Description: Decentralized Financial Ecosystem (DFE) is a cutting-edge platform designed to integrate cryptocurrency transactions with traditional financial services. The project leverages Rust for its high-performance backend and employs blockchain technology to ensure secure, fast, and transparent transactions across different financial applications.

Responsibilities & Achievements:

- Developing and optimizing back-end systems using Rust to handle high transaction volumes securely and efficiently;
- Implementing multi-threaded processing capabilities to ensure system scalability and performance;
- Integrating DFE with various DeFi protocols to create a seamless bridge between cryptocurrency and traditional finance;
- Ensuring the security and reliability of the platform by conducting thorough code reviews and implementing best practices;
- Collaborating with front-end teams to deliver a smooth and user-friendly experience for managing cryptocurrency assets.

Environment: Rust, Actix, Tokio, PostgreSQL, Redis, Docker, Linux CLI, DeFi Protocols.

AUTHORIZATION & AUTHENTICATION GAME SYSTEM | SOFTWARE ENGINEER

From January 2021 To July 2021

Description: Web API project that authorizes users through Google, Apple and other services. It's also responsible for the aggregation of the user and the player, collects information about game achievements, allows the user to make payments and buy things in the internal store. A system for analyzing and monitoring user actions has been introduced.

Responsibilities & Achievements:

- Configuring JWT authentication;
- Cover application with Unit tests;
- Cover application with end-to-end tests;
- Development logical part of system;
- Configuring API key and JWT authentication;
- Determining project requirements and developing work schedules for the team;
- Task management.

Environment: Rust, Playfab, Docker, Azure, Dart, PostgreSQL, Pipeline, CI/CD, Flutter, TypeScript, Firebase, Firestore, JavaScript.

ONLINE STORE | SOFTWARE ENGINEER

From June 2020 To December 2020

Description: Web application with microservice architecture. This is a very simplified system for buying and selling goods of various kinds. On this site, anyone can create an account and place ads. Shoppers can browse products and find what suits them by filtering products. Then, if desired, they can use the chat or contacts of the seller to purchase this product. Also on this platform there is an administrator page that can moderate and control the processes on the site.

Responsibilities & Achievements:

- Design application architecture;
- Cover application with Unit tests;
- Cover application with Integration tests;
- API schema development;
- Development of microservices architecture;
- Configuring API key and JWT authentication;
- Determining project requirements and developing work schedules for the team;
- Task management;
- Implement new functionality;
- Code review.

Environment: C#, .NET Core, ASP.NET MVC, Entity Framework, Microservices, MS SQL Server, MongoDB, JWT, xUnit, Docker, Consul, RabbitMQ, Angular, JavaScript, HTML/CSS, Azure Blob Storage, Azure App Service, Azure Cosmos DB, Azure Functions, Azure Devops, Azure Key Vault, BitBucket.