

# DENIS O. VODOPIANOV

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## ABOUT

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Software engineer with a decade of experience specializing in distributed systems, with a focus on scalability, reliability, and performance. I have experience moving from monoliths to microservices to scale a business and back to microoliths to optimize cost and performance.

I enjoy solving various system problems as well as low-level algorithmic challenges. My key strengths include analytical thinking, empathy, a strong bias for action, ownership, and a focus on customer needs.

## SKILLS

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Programming Languages:	Kotlin, Java, Scala, Python, Go, Typescript
Web Frameworks:	Spring Boot, Vert.x, Netty, Play, Express.js
DevOps:	Docker, Kubernetes, Terraform, Ansible, Jenkins, Gitlab CI/CD, Argo CD, Datadog, ELK stack, Grafana, Prometheus
Databases:	Postgres, Mongo, DynamoDB, Cassandra, Redis
Networking:	TCP/IP, HTTPS, WebSockets
Big Data:	Hadoop, Hive, Pig, Hbase, Clickhouse, Storm, Spark, Airflow

## WORK EXPERIENCE

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### Trade Republic Bank

*Senior Software Engineer*

October 2023 - April 2024

Berlin, Germany

- Was in charge of the system responsible for user accounts and balances, focusing on correctness, low latency, and high availability.
- Joined the task force team, resolved several integration issues, and delivered a system required to launch the Cards product within the projected timeframe.
- Identified hotspots and reduced the 95th percentile response latency from 20 ms to 5 ms.
- Delivered a reconciliation system processing 150 million transactions daily to ensure data consistency across different banking systems.

### Picsart

*Senior Software Engineer II (Lead developer)*

January 2022 - March 2023

Berlin, Germany

- The team had full ownership of the user tracking component in the analytics platform, processing billions of events per day and reaching 200k eps at peak load.
- Optimized the event ingestion component, reducing fleet size by 40% and freeing up resources for new projects.
- Implemented an edge component with pluggable authentication and back-pressure mechanisms for the analytics platform using an Envoy-based API gateway; implemented HMAC-based authentication for SDK clients.
- Reduced mean deployment time by 10x and halved change failure rates by moving backend services to trunk-based development and implementing common, reusable CI/CD pipelines with continuous or on-demand live deployment.
- Implemented various safety nets, including quality gates, comprehensive automated tests, feature flags, and alerts on SLOs to effectively identify and resolve deployment issues while moving fast.
- Mentored software engineers, fostering their growth and creating strong commitment to ownership, improved code quality, and reduced technical debt.
- Conducted several trials to replace costly third-party customer engagement services and worked with the ML team to demonstrate that the company could achieve the same results with its own components, saving hundreds of thousands of dollars per year.

### N26 GmbH

*Senior Software Engineer, Acting Tech Lead*

March 2020 - January 2022

Berlin, Germany

- The team had full ownership of the identity platform with a strong focus on security, scalability, reliability, and compliance.
- Implemented strong customer authentication to achieve full compliance with PSD2.
- Designed and implemented several foundational authentication mechanisms for product teams to use across various N26 products.

- Automated access recovery processes for non-German customers, improving overall user experience and reducing operational costs.
- Actively participated in on-call rotations and incident response, addressing critical issues and minimizing downtime.
- Worked closely with product and ML teams on in-house R&D projects, creating a roadmap that incorporated valuable insights to enhance the security of the identity platform.

#### **Freelance, Contractor**

*Lead Software Engineer at Plutus.ai*

November 2018 - February 2020

Saint-Petersburg, Russia

- Led a team of 5 engineers to deliver a casual crypto portfolio with near real-time market data, daily challenges, and social elements.
- Quickly identified and resolved system scalability issues to meet the demands of a growing client base, ensuring the system could handle increased workloads and support future growth.
- Delivered a strategic initiative to enhance internal gamification mechanics by providing near real-time dashboards, leaderboards, and daily challenges.
- Successfully developed a framework for fast and hassle-free integration with exchanges and news feed partners. Reduced integration time and effort and enabling the organization to rapidly expand its network of partners and market coverage.

#### **Multiple companies**

*(Senior) Software Engineer*

May 2012 - November 2018

Saint-Petersburg, Russia

- Started career at a small ad startup, implemented several statistical models to improve CTR for ad campaigns.
- Joined the Java Test division at Oracle and helped release Java 8 and multiple Java 6/7 versions.
- Successfully delivered product features in various projects in ad tech, telecom, and fintech fields.

#### EDUCATION

##### **ITMO University**

September 2004 - February 2010

Saint-Petersburg, Russia

**Degree:** Master's degree in Optical Electronic Devices and Systems with specialisation in Optical-Electronic Devices and Systems for Video Information Processing

**Qualification:** Engineer

#### PROJECTS

##### **Indoor cycling HUD**

<https://github.com/grambbledook/indoor-cycling-hud>

**Tools:** C++, Bluetooth Low Energy, QT, sqlite, CMake, vcpkg

**Description:** An overlay app that aggregates data coming from BLE devices and renders workout statistics on the heads up display