

# DENIS O. VODOPIANOV

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## ABOUT

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Software engineer with decade of experience specialising in distributed systems with a focus on scalability, reliability and performance. I have experience both moving from monoliths to microservices to scale a business, and going back to microliths to optimise cost and performance.

I enjoy solving system problems of various kinds as well as low-level algorithmic problems. My key strengths include empathy, analytical thinking, strong bias for action, ownership, and ability to focus on the task at hand.

## 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 balance, focusing on correctness, low latency and high availability.
- Joined the task force team, resolved a number of integration issues and delivered a system required to launch the Cards product in projected timeframe.
- Identified hotspots and reduced the 95th percentile response latency from 20 to 5 ms.
- Delivered a reconciliation system processing 150M transactions daily to ensure data consistency between different banking systems.

### **Picsart** *Senior Software Engineer II (Lead developer)*

January 2022 - March 2023  
Berlin, Germany

- The team had full ownership of user tracking component in the analytics platform processing billions of events per day and at peak load reaching 200k eps.
- Optimised 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 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. This was achieved by moving backend services to trunk-based development and implementing common, reusable CI/CD pipelines with continuous/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 identity platform with strong focus on security, scalability, reliability and compliance.
- Implemented strong customer authentication to achieve full compliance with PSD2.

- Designed and implemented a number of foundational authentication mechanisms for product teams to utilise across various n26 products.
- Automated access recovery processes for non-German customers improving overall user experience and cutting 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, resulting in the creation of a roadmap that incorporated valuable insights to enhance 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 casual crypto portfolio with near real-time market data, daily challenges and social elements.
- Within a short timeframe identified and resolved system scalability issues to meet the demands of a growing client base, ensuring the system could handle increased workload and accommodate future growth effectively.
- Delivered a strategic initiative of enhancing 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. This helped to reduce integration time and effort, enabling the organisation to rapidly expand its network of partners and market coverage.

## 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