

# Denis O. Vodopianov

Berlin, Germany · [grambbledook@proton.me](mailto:grambbledook@proton.me) · <https://github.com/grambbledook>

## Skills

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Programming Languages:	Kotlin, Java, Scala, Experienced with Python and Typescript, Familiar with Go
Web Frameworks:	Spring Boot, Vert.x, Netty, Play, Express.js, Gin
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	October 2023 - Today
Senior Software Engineer	Berlin, Germany

- In charge of the system responsible for user balance, focusing on correctness, low latency and high availability.
- In short time frame identified and fixed a number of critical issues preventing the release of the system required to launch the Cards product.
- Identified hotspots and reduced the 95th percentile response latency from 20 to 5 ms.
- Delivered a reconciliation system to ensure data consistency between different banking systems.

Picsart	January 2022 - March 2023
Senior Software Engineer II (Lead developer)	Berlin, Germany

- The team had full ownership of user tracking component in the analytics platform with strong focus on scalability and performance.
- Optimised the event ingestion component, reducing fleet size 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 services and worked with the ML team to show that the company could achieve the same results with the right components while saving significant money.

N26 GmbH	March 2020 - January 2022
Senior Software Engineer, Acting Tech Lead	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

September 2018 - February 2020

Lead Software Engineer at Plutus.ai

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.

Nexign Systems

August 2017 - September 2018

Lead Software Engineer

Saint-Petersburg, Russia

- Led the development and testing processes in a team of 7 engineers, ensured seamless execution and delivery of software updates, minimising downtime and service disruptions.
- Worked closely with the product team to execute a successful legacy PRM system refresh aiming cloud deployment and improving its efficiency and protecting it against evolving industry demands.
- Design a standard load testing framework that provided crucial insights for optimising system performance and ensuring its ability to handle increasing loads at peak usage periods.

Contractor, multiple clients

June 2014 - August 2017

Senior Software/Data Engineer

Saint-Petersburg, Russia

- Developed a trusted relationship with senior leadership at a client specialising in the analysis of digital advertising placements, fostered a strong partnership that resulted in improved collaboration, alignment of goals, and enhanced client satisfaction
- Designed and delivered a system for controlled testing and release of statistical and ML models. The system significantly reduced mean deployment time and risks associated with model deployment and provided valuable insights for enhancing models performance and accuracy.

Oracle

November 2012 - June 2014

Software Developer in Test, Java JDK

Saint-Petersburg, Russia

- Designing comprehensive tests for multiple features including potential and real security vulnerabilities.
- Improved stability and performance of the testing framework, enhancing overall productivity and reliability in the testing process.
- Led Nightly build report analysis, implemented a number of system enhancements, that helped to automate report generation, resulting in improved efficiency and accuracy in bug triaging and resolution

## Education

ITMO University

Saint-Petersburg, Russia

September 2004 - February 2010

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

A/B Experimentation and User Tracking Platform

2022-2023

Tools: Typescript, Kafka, Kotlin, Java, Mongo, Redis, Envoy, AWS, k8s

Description: Highly scalable system capable of handling billions of events per day  
and peak load up to 200k eps

Identity platform for a challenger bank

2020-2022

Tools: Kotlin, Java, AWS, Terraform, Kubernetes, Redis, Kafka, Go.

Description: Highly scalable and resilient system capable of handling millions of authentication and  
authorization requests per day

ML deployment platform

2015-2017

Tools: Python, Scala, Java, Airflow, Hive, Spark, Hbase, Kafka, Parquet, Avro and a dozen of glue tools

Description: Platform for statistical and ML models production deployment with support of AB testing  
and model versioning