

Andrew Barchuk

SOFTWARE ENGINEER

Berlin, Germany

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Summary

A software engineer passionate about building dependable systems with more than a decade of experience dedicated to platforms and backend services. The areas of focus include *distributed systems, concurrency, reliability, scalability, performance, and observability*.

Skills and technologies

programming	Zig, Go, C, Python, Rust, Java
data storage	Kafka, DynamoDB, Cassandra, Spanner, PostgreSQL, MongoDB, ZooKeeper
software design	software architecture and design patterns, microservices, CQRS · algorithm analysis and implementation, concurrency
web	HTTP, RESTful API design, WebSockets, networking stack (TCP, UDP, DNS)
performance	profiling and optimization: heap analysis, CPU sampling, JVM GC, benchmarking, load testing
testing	TDD practitioner, JUnit, Mockito, property-based testing
DevOps	Kubernetes, Docker · AWS, GCP · Prometheus, Grafana, distributed tracing · Linux/Unix administration, ZFS, RAID
security	securing APIs, OAuth, applied cryptography
languages	English, German (B2), French (beginner), Ukrainian, Russian

Experience

Zalando

Berlin, Germany

PRINCIPAL SOFTWARE ENGINEER, RISK AND ABUSE MANAGEMENT

Oct. 2022 - Present

- Led a multi-year effort to build a deterministic, traceable near-real-time central risk platform, improving reaction time from hours to minutes.
- Standardized and streamlined risk MLOps infrastructure, reducing candidate model delivery time from weeks to one day.
- Facilitated adoption of Apache Flink as the company-standard stream processing framework.
- Co-designed an event-sourced historical order store and led the data migration effort.
- Contributed to the design of the central ML & AI platform to reduce model development lead time and infrastructure fragmentation.
- Designed an invite-only purchase model to address the instability risk of high-demand products and bot automation.
- Drove technical vision and target architecture for a 3-team department of 20+ engineers & applied scientists.

LEAD SOFTWARE ENGINEER, CHECKOUT BACKEND

Oct. 2020 - Oct. 2022 (2 years)

- Scala, Java, Apache Flink, Kafka, DynamoDB, Cassandra, Kubernetes, AWS
- Evolved business-critical purchase systems, including a zero-downtime migration from Cassandra to DynamoDB.
- Helped establish the newly formed team: onboarding, mentoring, defining processes. Owned performance, reliability, and managed tech-debt.
- Facilitated reconciliation of load-shedding and traffic shaping measures across Zalando.

Revolut

Berlin, Germany

SENIOR SOFTWARE ENGINEER, OPEN BANKING

Jun. 2020 - Sep. 2020 (4 months)

- Java, PostgreSQL, Spring · Identified and addressed a concurrency bottleneck in the core data synchronization job, improving its reliability and performance; increased transaction enrichment accuracy.

Google

Zurich, Switzerland

SOFTWARE ENGINEER, YOUTUBE CHANNEL MEMBERSHIPS

Jul. 2018 - Mar. 2020 (1 year, 9 months)

- C++, Spanner, PubSub, CQRS, Stubby · Worked on subscription-based, user-supported YouTube monetization. Projects: iOS payments, optimized channel members retrieval latency (100x for large channels), pricing levels.
- Rust · Personal project (Google 20% time): in-place renaming of symbols in object files (ELF, Mach-O, PE/COFF) for the Mundane cryptographic library.

Tink

Stockholm, Sweden

SOFTWARE ENGINEER, CORE PLATFORM

Oct. 2016 - Jun. 2018 (1 year, 8 months)

- Java, Go, Cassandra, MySQL, Kafka, ZooKeeper, Elasticsearch, AWS, Prometheus, Grafana, Kibana, SaltStack, Terraform · Developed the core transaction-processing platform. Contributions: autoscaling, driving microservice migration, continuous delivery, performance improvements, testing advocacy, hands-on infrastructure work.

Playtika

JAVA DEVELOPER, INFRASTRUCTURE SERVICES

Kyiv, Ukraine

Mar. 2016 - Oct. 2016 (8 months)

- Spring Boot, Apache Kafka, Couchbase · Built a service for message delivery to end users via WebSockets.
- Java, Facebook Marketing API · Built a Facebook ad-audiences management service with in-memory processing of large datasets.

Yandex

SOFTWARE ENGINEER, KINOPOISK MOVIE PLATFORM

Kyiv, Ukraine

Apr. 2014 - Mar. 2016 (2 years)

- Java, Spring Framework, Jetty, MongoDB, MySQL · Built backend integrating kinopoisk.ru (movie catalogue) with Yandex services under high load. Designed REST APIs, worked on authentication and authorization, load testing, performance optimization, JVM profiling. Facilitated team TDD adoption and mentored new project members.

DIO-Soft

JAVA DEVELOPER, STATE STREET BANK

Kyiv, Ukraine

Nov. 2013 - Mar. 2014 (5 months)

- Restlet Framework, Spring DI, JAXB, Sybase, JDBC, JUnit, Mockito · Developed a backend of a financial data monitoring service with TDD and integration testing.

NetCracker

JUNIOR SOFTWARE ENGINEER, SYSTEM INTEGRATION

Kyiv, Ukraine

Mar. 2013 - Oct. 2013 (8 months)

- Java, SOAP web services, PL/SQL, JSP, JavaScript · Delivered client integration projects.

Open source contributions

Mundane, Rust cryptographic library (<https://github.com/google/mundane>)

BUILD SYSTEM IMPROVEMENTS, ELF/MACH-O/COFF MANIPULATION

2019

- Reimplement listing of exported symbols in object files in Rust, remove dependency on Go from build system.
- Replace two-step build process with in-place symbol renaming.

goblin, Rust object file parsing library (<http://github.com/m4b/goblin>)

MACH-O, AND LIBRARY ARCHIVE PARSER IMPROVEMENTS

2019

- Prevent parser crashes on certain Mach-O files.
- Implement parsing of Windows-specific library archives.
- Implement detection of static library archive type.

Talks

Lessons Learned From Building the Fashion Store Checkout Data Platform

Berlin, Germany

ZALANDO INTERNAL

2025

Distributed coordination: ZooKeeper and Chubby

Zurich, Switzerland

GOOGLE INTERNAL

2018

Distributed Locking with MongoDB

Kyiv, Ukraine

YANDEX JAVA PARTY

2015

Education

Igor Sikorsky Kyiv Polytechnic Institute

Kyiv, Ukraine

BACHELOR OF SOFTWARE ENGINEERING

2010-2015