Sokolov Denis

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EDUCATION

ITMO University x Yandex

ITMO, Saint-Petersburg

Sept 2024 - Present

Master in High-load Systems Software Coursework: Algorithms and Data Structures, C++ programming,

Advanced Databases, SHAD Computer networks,

Distributed systems, Cloud Computing

ITMO, Saint-Petersburg

Sept 2020 - July 2024

Bachelor in Information System and Technologies

Coursework: Programming Technologies, Multiprocessor Programming, Network Technologies, Development Tools,

Databases, Web Programming, Operating Systems, Algorithms and Data Structures

Diploma: Backend development of the application for automating the execution of raw materials assemblies

SKILLS SUMMARY

ITMO University

• Languages: Go, Python, C#, JavaScript

• Databases: PostgreSQL, MongoDB, Sqlite, Redis

• Technologies: REST, gRPC, Git, Docker, CI/CD Gitlab, Kafka, Jira, OpenTelemetry

• Frameworks: Gin Gonic, Echo, Go-chi, jmoiron/sqlx, gomock, go-sqlxmock

EXPERIENCE

$\underline{Notissimus} \mid Go, Postgre SQL, Java Script$

Nov 2023 - Jan 2025

Software Engineer

Application Architecture and Development

- * Designed and developed an MVC multi-layered application architecture
- * Created database architecture compliant with the 3rd normal form (at least)

Key Implementations

- * Developed an external service to save the history of updated components
- * Restricted users from switching between pages by implementing a chain of API calls
- * Integrated JavaScript scripts

• Project Support

- * Rapidly identified and fixed bugs in an unfamiliar project
- * Demonstrated projects to customers

$\underline{\mathbf{Tinkoff}} \mid C\#, ASP. NETCore, EFCore, PostgreSQL, OpenTelemetry, Jaeger$

June 2023 - Aug 2023

Backend Development, Intern

\circ Service Stability and Testing

- * Enhanced the stability of several services through bug fixes
- * Wrote unit and integration tests for all modified code

o Distributed Tracing

- * Added distributed OpenTelemetry tracing in 2 team services and 8 services of neighboring teams
- * Collected traces for HTTP, ASP.NET Core, MediatR requests, and EF Core by integrating a new version of the NuGet package
- * Enabled trace monitoring in the Jaeger UI

ITMO SourceKit | C#, CodeAnalysis, Xunit

May 2023

Backend Development, Intern

- Implemented an analyzer to ensure Dictionary keys implement the IEquatable interface (for the purpose of future students educational purposes)
- Developed tests and samples to verify correctness

- $\bullet \underbrace{ \textbf{Ozon Tech Route 256}}_{Backend \ Development, \ Junior \ level} | \textit{C\#}, \textit{ASP.NETCore}, \textit{Dapper}, \textit{PostgreSQL}, \textit{Kafka}, \textit{gRPC}, \textit{Protobuf}$ Feb 2023 Apr 2023
 - Worked with databases using the Dapper framework and PostgreSQL
 - Implemented tasks requiring asynchronous or parallel execution
 - o Facilitated asynchronous interaction of microservices using Kafka
 - Managed synchronous interaction of microservices using gRPC and Protobuf technology
 - Developed unit and integration tests

ACHIEVEMENTS

$\textbf{YDB Distributed Tracing} \mid Golang, Open Telemetry, Grafana, YDB, testify$

Sep 2024 - June 2025

Contributing

o Exporter of traces, logs and metrics

- * Supporting YDB (Yandex DataBase) Open Telemetry exporter of metrics, logs and traces in columnar storage
- * Refactoring, updated metric scheme and new supported metric types: histogram, exp-histogram, summary
- * New types of authorization in YDB: writing within file, using service account and using metadata service
- * Unit and integration tests

Grafana plugin for viewing

- * Supported reading data from YDB and refactioring
- * Added Date DateTime macros for YQL-queries
- * New converters from YDB-types to Go-types: base, string, serial, containers, Optional-types. Also included nested-types
- * Unit and integration tests

$\underline{\mathbf{Yaiot}} \mid Python, YDB, aiogram$

Nov 2024

- Hackathon participant, Backend
 - Implementing telegram bot for generating user-links of YandexSmartHome scenarios, that stores in YDB. Everyone who has this link can easily just click on it and run scenario
 - Audience award as a result

PROJECTS

Jan 2025

- Getting data from NewYork taxi dataset and creating two MongoDb collections: raw data, trip start and end data separately using aggregation pipeline
- Implementing horizontally-scaled service, that writes messages to Kafka with exactly once guarantee, turned off auto.commit and earliest auto.offset.reset
- Reading data by Kafka-consumer and updating current state in Redis (amount of active trips by location id) with an emergency restart possibility
- Selection from Redis for each district at the current time of the most popular district from which people trave

$MyRedis \mid Golang, Redis$

Aug 2024 - Present

Own Development, Backend

- o Implemented RESP (Redis serialization protocol) that decodes client requests and encodes responses
- Added PING, ECHO, GET, and SET (with 'px' expiry parameter) commands support, enabling execution from concurrent connections and handling multiple concurrent requests per connection