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Work and volunteering

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| 2023 - 2024 | Cloudless Labs (ex Fluence Labs) - Aqua Language - Compiler Engineer - Scala Developing compiler for Aqua - language for computation orchestration in Fluence peer-to-peer network: <ul style="list-style-type: none">Working with all compilation stages: parsing, type checking, IR passes, optimizations, code generation.Design and implementation: folding over a CRDT stream (language primitive), class-like language construct called abilities (unison inspired), math optimizations, tracing code augmentation, boolean algebra.Optimized linking stage gaining 4x speedup on large projects.Development and maintenance of VSCode extension. |
| | Mosaic Research - Crypto HFT - Backend Engineer - C++ Development and maintenance of infrastructure for crypto trading: <ul style="list-style-type: none">Implementing microservices communication protocol with Aeron.Setting up CI pipeline for CMake projects: building, testing, caching, automatic dependencies updating.Developing scripts and small microservices with python3. |
| 2021 - 2022 | Tinkoff - Credit and Brokerage Systems - Backend Engineer - Scala Development and maintenance of online credit broker backend on microservice architecture: <ul style="list-style-type: none">Design and implementation of business functionality.Integration of message brokers: RabbitMQ and Kafka.Integration of databases: MongoDB and PostgreSQL. |
| | Summer School «Slon» in Pushchino - Volunteer-Tutor Courses taught: Formal languages, Mathematical logic, FP in Scala, Python from scratch. |

Courses

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| 2021 | MIPT - Concurrency course C++. Implementation of simple concurrency library: fibers, futures, thread pool. |
| 2021 | MIPT - Distributed systems C++. Implementation of distributed consensus and replication algorithms: paxos, multi paxos, raft. |
| 2020 | Tinkoff.Fintech - Scala development course Scala. Implementation of StopLoss-TakeProfit service integrated with tinkoff.investments. |
| 2020 | Mail.ru - Introduction to production programming and data structures C, C++. Implementation of stack machine emulator and high-level language compiler for it. |
| 2017 - 2019 | Air engineering school in Russia - Sounding rocket payload development C for AVR and STM32. Development of on-board firmware and peripheral drivers. |

Projects

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| 2022 | Oolong Compile-time query generation lib for document stores Scala. Compile-time query generation implemented with scala3 macros. Inspired by Quill. |
| 2019 | PEGgen - Command line utility Python3. Generation of recursive descent parser from formal grammar. |
| 2021 | yaelc - Compiler of java-like language C++. Scanner (GNU Flex), LR-parser (GNU Bison), AST, type table. |
| 2017 - 2019 | librsics - Peripheral drivers library for AVR C for AVR. Driver for Iridium9602 modem and testing of other modules. |

Education

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| 2024 - now | Constructor University Bremen - Software, Data and Technology Bachelor's degree. |
| 2019 - 2022 | Moscow Institute of Physics and Technology - Phystech School of Applied Mathematics and Informatics - Engineering and Computer Science Bachelor's degree (unfinished). |

Skills

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| Programming languages | Scala, C/C++, Python3, TypeScript, Haskell |
| Technologies | MongoDB, PostgreSQL, RabbitMQ, Kafka |
| Frameworks and libraries | ZIO, cats, fs2, akka-http, Aeron |
| Tools | git, cmake, sbt, Gitlab CI, Github Actions, liquibase |
| Languages | Русский(родной), English(B2) |

Up to date version of this CV