

Balakhnin Sergei

Software Engineer Contacts

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Work Experience

JetBrains, Qodana team.
Stack: Kotlin, Java, Static Analysis
Specialization: developer in core team of static analyzer tool.
Period: 7.2021 - 03.2022

Huawei, Programming Language team.
Stack: C/C++, research
Specialization: develop translator from Java to other language
Period: 10.2020 - 04.2021

Huawei, project - LLVM compiler.
Stack: C/C++, research
Specialization: develop profile guided optimization for clang compiler
Period: 06.2020 - 10.2020

Tinkoff internship, project - website kassir.ru.
Stack: Java, Kotlin, Spring
Specialization: Backend-developer
Period: 06.2019 - 09.2019

Education

Bachelor's degree at Computer Science in ITMO.

GPA: 4.1 / 5

Specialisation: mathematics and Computer Science. ITMO is 79-th world university by CS based on "QS World University Ranking".

Key skills

- **Programming languages.**
Industry Experience: Kotlin, Java. Educational knowledge: Haskell, Go, C++, Python.
- Deep knowledges of algorithm and data structure.
- Theoretical and practical experience in multiprocessing programming.
- SQL.
- Professional English.
- Git experience.

Educational projects, achievements

- **Bachelor's thesis.** Work on active module identification problem in bioninformatics domain. Upgrade approach described in: *Markov chain Monte Carlo for active module identification problem*. My solution add support for another kind of input data (add support for metabolics networks). Stack: R, C++ Project link: <https://github.com/sergalb/mcmcRanking>
- **LALR-grammar parser's generator** (subset ANTLR)
Stack: Kotlin, ANTLR
Project link: <https://github.com/sergalb/ParserGenerator>
- **Utility for searching substring in directory** (analogy to grep, with UI)
Stack: C++, QtCreator, Multithreading.
In this project, I managed to achieve a performance that exceeds grep (due to pre-calculation)
Project link: <https://github.com/sergalb/cpp-third-term/tree/master/SubstringFinder>

- **Android apps**

Stack: Kotlin, Multithreading, REST

Project link: <https://github.com/sergalb/android-2019>

- **Haskell applications**

Stack: Haskell, ghc

hw-2: Own file-system and base version system

hw-3: Atomic tasks on lenses, concurrency, interpreter of JavaScript subset

<https://github.com/sergalb/fp>

- **Factorizing big numbers with dixon's method**

Stack: Kotlin, mapple, linear algebra

implementation of *Dixon* <https://github.com/sergalb/computer-algebra>

- Prize-winning in math olympiads - "Rosatom", "PhysTech", "OMMO", "Future researchers - the future of science"

- 3 years volunteering on NERC ICPC final (semi-final of whole world programming competition)