

# Balakhnin Sergei

## Software Engineer Contacts

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## Work Experience

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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: Go, 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

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### 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

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- **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.
- Experience in web-programming, Spring.
- SQL.
- Professional English.
- Git experience.

## Educational projects, achievements

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- **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, concurency, 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)