Andrei Tonkikh

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--- **Summary** ---

I am a computer science student fascinated by the topic of distributed systems. I am highly interested in multiprocessor programming, operating systems and system programming in general. My long term goal is to do reasearch and development in distributed systems and multiprocessor programming.

--- **Education** ---

St. Petersburg branch of the Higher School of Economics   *2018 – Present*
BS in Computer Science (continuing)
Graduating July 2019

St. Petersburg Academic University   *2015 – 2018*
BS in Computer Science

--- **Work Experience** ---

Junior Software Engineer at Yandex   *January 2019 – Present*
Enhancing job scheduling algorithms for YT. YT is a distributed batch-processing platform based on Map-Reduce paradigm running on many thosands of machines. In particular, I'm trying to deal with the problem of resource underutilization caused by fragmentation.

SWE Intern at Yandex   *July – December 2018*
Investigated the problem of resource fragmentation on YT clusters. Improved and modernized scheduler simulator – a tool to simulate the traces from the production scheduler and evaluate scheduling strategies.

SRE Intern at Google   *Summer 2017*
Was part of Traffic Team SRE in London. Improved observability of Google Cloud Engine. Designed, implemented and integrated a library for reporting statistics from test instances of GCE components.

--- **Open Source Contribution** ---

Packer Builder for VMware vSphere   *Fall 2017*
Automated creation of virtual machines and OS installation in vSphere environment. The project is in Go language.
github.com/jetbrains-infra/packer-builder-vsphere

Rust Standard Collections Library   *Spring 2016*
Contributed to the implementations of B-Tree and Binary Heap in rust standard library.
github.com/rust-lang/rust/pull/33947 and *github.com/rust-lang/rust/pull/32987*

--- **Most Relevant University Courses** ---

Fall 2018	External Memory Algorithms, Big Data Software Engineering
Spring 2018	Parallel Programming, Containerization, Computer Networks, Compilers
Fall 2017	Linux Kernel, Databases, Statistics, Software Engineering
2016 − 17	Operating Systems, Functional Programming in Haskell, Java
2015 − 16	Algorithms and Data Structures, C++, Linux Administration

Courseworks include, but are not limited to, writing *multi-threaded OS-kernel* and a simple *containerization utility* in Rust, creating simple linux kernel modules in C, implementing a very basic *mapreduce framework* in Kotlin, a x86 compiler in OCaml, and a *multiplayer 3D action game for Android* in Java.

--- **Programming Languages** ---

Strongest:	C++, C
Comfortable:	Go, Kotlin, Java, Rust, Python, Bash
Limited Experience:	Scala, R, Haskell, OCaml

--- **Other Experience** ---

Programming Competitions
· 8th place at Google HashCode 2018 Finals in Dublin.

High School Programming Competitions
· Actively participated and was awarded at many programming competitions in High School.

Teaching
· Taught algorithms and data structures to high school students at "Summer Informatics School".