ZAKHAR LOPTEV

# EDUCATION

**Higher School of Economics** Sep 2019 – Expected Jun 2023 Bachelor in Applied Mathematics and Information Science

# GPA: 9.11/10.0 SKILLS

**Programming Languages** C/C++, Python, Bash, Assembler

**Technologies** Linux, Windows, Cygwin, WSL, Git, GitHub/GitLab, vim, gdb/pdb, tmux,

LaTeX, Markdown, Tcl/Tk, Make, numpy, matplotlib, pandas

# WORK EXPERIENCE

**Software Engineering Intern** Jul 2020 – Sep 2020

**Huawei** *Moscow, Russia*

* Made an OS performance analysis system available for over **400** Windows-using colleagues by porting it from Linux to Windows using **Cygwin**, **Bash** and **Python**.
* Taught myself **Tcl/Tk** in a few days and reduced time for visualizing OS performance analysis by **80%** by implementing a GUI using **Python** and **Tkinter library**.

**Python Developer** Jun 2018 – Aug 2018

**SamExpress** *Samara, Russia*

* Reduced time for searching applications on a website by **2 man-hours a day** by implementing a script using **Python** with **Selenium and SMTP libraries**.
* Created a program making a raw Excel document readable using **Python** and **xlrd, xlwt, xlutils libraries**. **TEACHING EXPERIENCE**

**Linear Algebra Teaching Assistant** Sep 2020 – Jun 2021

**Higher School of Economics** *Moscow, Russia*

* Checked homeworks, conducted weekly consultations, took exams and colloquiums.
* Generated homework variants using **Python** with **numpy**, **sympy**, **latex** and other libraries.

# Algorithms Teaching Assistant Aug 2019

**Summer Informatics School** *Laagna, Estonia*

* Developed front-end for a sports [**website**](http://sport.lksh.ru/) using **HTML5**, **CSS3** and **JavaScript**. **PROJECTS**

[**External Sorting.**](https://github.com/beastSL/external-sorting)Implemented external sorting (the algorithms splits all input into blocks, sorts them sepa-

rately, and then ends up with a sorted array by recursively merging K array’s segments) using **C++**.

[**Time Series Forecast.**](https://github.com/miska924/TimeSeriesForecast)Taught myself a one-year course of **Probability Theory and Mathematical Statis- tics** in one semester, currently developing a tool that, given a series of share prices, calculates a probability of the price moving in a certain range. Using **Python** with **numpy**, **plotly**, **pandas** and other libraries.

[**Hash Map.**](https://github.com/beastSL/HashMap)Implemented hash map with full functionality (including iterators) using separate chaining with linked list in **C++** for my homework project.

[**VS projects cleaner.**](https://github.com/beastSL/vs-projects-cleaner)Created a **Python** tool that clears a code repo from memory-intense Visual Studio projects using **os library** and dfs-like algorithm.

# ACADEMIC ACHIEVEMENTS

* Awardee of All-Russian Informatics Olympiad (also known as ROI).
* Master at Codeforces.