Gleb Posobin

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Education

2018–now **PhD, Theoretical Computer Science, Columbia university**
Currently working on information theory, data structure lower bounds.

2014–2018 **B.Sc., Computer Science, Higher School of Economics**
First in the cumulative rating of senior students.

2014–2016 **Independent University of Moscow** — ium.mccme.ru/english
This is an institution where advanced math courses are taught. I have
finished the first year and took several second-year courses, such as
complex analysis and differential geometry.

Work experience

2019 **Software engineering intern at Cruise** — getcruise.com
Developed a prototype for an improved lidar calibration system
that decreases *total* sensor calibration time 4x for each car.

2016–2018 **Research assistant at the laboratory of theoretical
computer science, Higher School of Economics**

2017 **Summer research internship at EPFL, Switzerland** — ic.epfl.ch/SummerAtEPFL
Worked for two and a half months on a project in information theory.

2017–2018 **Machine learning researcher at Prisma labs** — prismalabs.ai
Worked on various deep learning research projects, such as image
generation with GANs, improvements to classical image style transfer,
and scene recognition.

Selected projects

2019–now **Ampie** — ampie.app
Browser extension that on every web page highlights the links — github.com/posobin/ampie
that had appeared in your Twitter feed or on Hacker News, and lets you
discover and share interesting pages. In Clojure and ClojureScript.

2015 **Convolutional neural networks in C++** — github.com/cs-hse-projects
A custom framework for creating and using convolutional neural nets /artificial-neural-network
in C++ on CPU, takes advantage of multithreading.

2015 **xv6** — github.com/posobin/xv6
Extended Unix-like educational OS xv6 to support multithreading,
added kernel memory allocator, users and various smaller features.

2012 **Unofficial last.fm client for windows phone** — github.com/posobin/wp.fm

Achievements

2015, 2016   Prize winner at the International Mathematical Competition for university students
          Won third prize in 2015 and second prize in 2016.
     imc-math.org.uk

2016, 2017   Double recipient of Ilya Segalovich scholarship
          Ilya Segalovich scholarship is merit-based and awarded yearly to the students of computer science department at Higher School of Economics by Yandex.

Papers

2020   Polynomial Data Structure Lower Bounds in the Group Model
       Alexander Golovnev, Gleb Posobin, Oded Regev, Omri Weinstein
     eccc.weizmann.ac.il /report/2020/057
     To be presented at FOCS 2020

2018   Random noise increases Kolmogorov complexity and Hausdorff dimension
       Gleb Posobin, Alexander Shen
     arxiv.org/abs/1808.04626
     Presented at STACS 2019

2016–2017   Computing majority with low-fan-in majority queries
       Gleb Posobin
     arxiv.org/abs/1711.10176

2017   Plain stopping time and conditional complexities revisited
       Mikhail Andreev, Gleb Posobin, Alexander Shen
     arxiv.org/abs/1708.08100
     Presented at MFCS 2018

Technical experience

languages   C++, Clojure(Script), Python — good working knowledge, actively using
       C#, Ruby — had good knowledge of, used in the past
       Bash, ML, Racket, F#, assembly, JavaScript — fair knowledge

technologies   Unix, React, SQL, Postgres — good working knowledge
       Pytorch, TensorFlow — had good knowledge of, used in the past