

Sergey Serebryakov

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Specialization ML/AI Engineer (US citizen, looking to relocate to London)

Skills and interests

Professional: research infrastructure, deep learning, distributed systems, GPU clusters, performance optimizations, parallel computing, backend engineering, computer vision, autonomous driving, functional programming
Recreational: reinforcement learning, NLP, AI safety, frontend engineering, computer security, type systems

Programming languages:

Professional: Python, C++, Go, Scala, Java, JavaScript

Recreational: Rust, Haskell, TypeScript, Elm, Erlang, PHP, Perl

Other technologies/libraries/tools: PyTorch, CUDA, Spark, Airflow, Docker, Grafana, Kafka, GCP, AWS, perf, bash, Linux, Git, Jenkins, SQL, HTML, CSS, React, Bootstrap, LaTeX, IntelliJ

Open source contributions: Apache Airflow, Apache Spark, Petastorm, Pants, Rich

Work

Hudson River Trading (New York, US)

Algorithm Engineer, Jun 2021 – Jan 2023

Options Market Making: research and trading infrastructure

- Integrated with options exchanges, implemented new order types
- Optimized performance of simulation for backtesting
- Built and improved risk monitoring tools

Cruise LLC (San Francisco, California, US)

Senior Software Engineer, Jul 2019 – Jun 2021

Machine Learning Platform: enabling AI research experiments

- Prototyped and drove research team's adoption of PyTorch
- Enabled multi-GPU cloud training and evaluation on large-scale datasets
- Continuously improved deep learning models training performance (up to 30x)

Tesla, Inc. (Palo Alto, California, US)

Senior Software Engineer, Feb 2017 – Jun 2019

Autopilot Team: autonomous driving at scale

- Developed AI infra and tools powering labeling and evaluation of 1B+ dataset
- Automated the Autopilot Maps creation pipeline end-to-end
- Architected reproducible and performant Spark jobs platform
- Set up a distributed firmware CI regression testing cluster

Twitter, Inc. (San Francisco, California, US)

Software Engineer II, Sep 2014 – Feb 2017

- Search Infrastructure: maintained systems powering Twitter Search
- Build Infrastructure: improved compilation performance with prioritization

Rocket Fuel, Inc. (Redwood City, California, US)

Rocket Scientist, Oct 2013 – Sep 2014

Serving Infrastructure Team: distributed real-time bidding ad system

- Implemented high-performance standalone low-latency Geo IP lookup server
- Integrated with ad exchanges

Internships

JetBrains — IntelliJ Labs Co., Ltd. (St. Petersburg, Russia)

Software Engineer Intern (research on Java language), Nov 2012 – Aug 2013

Facebook, Inc. (Menlo Park, California, US)

Software Engineer Intern (infrastructure Python tooling), Jun 2012 – Aug 2012

Google, Inc. (Tokyo, Japan)

Software Engineer Intern (search, C++ backend + mobile web), Aug 2011 – Oct 2011

Google, Inc. (St. Petersburg, Russia)

Software Engineer in Test Intern (JavaScript debug tooling), Oct 2010 – Apr 2011

OpenWay Service, Ltd. (St. Petersburg, Russia)

Summer Intern (Java backend + web frontend), Jul 2010 – Aug 2010

Education

St. Petersburg State University, Department of Mathematics and Mechanics

Specialist in Software Engineering (≈ US Master's degree), Sep 2008 — Jun 2013

Graduated with honors (≈ summa cum laude)

Research

Formal Methods in Compilers: Build technique with aggressive output reuse (Java)

Graduate paper (advisor: Dmitry Boulytchev), 2012–2013

3D Algorithms in Medicine: Constructing a 3D model of a human head from anatomical landmarks (MATLAB)

Term paper (advisor: Alexander Petrov), 2011–2012

Computer Vision: Reconstructing moving object position from noisy video observations (C++, OpenCV)

Term paper (advisor: Alexander Vakhitov), 2010–2011

Awards

- Best student of Microsoft Research ALMADA School, 2013
- Prize of ACM ICPC Quarterfinals, 2009
- Finalist of TopCoder High School programming competition, 2008

- Winner of [Indeed Prime Codility Challenge](#), 2015
- Finalist of [Kotlin Challenge](#), 2014
- Winner of Open International Internet Competition on Informatics, 2010-2011
- Recipient of Excellence Scholarship of Euler Foundation, 2009
- Second prize of the All-Russian School Informatics Competition, 2008
- Winner of Open School Cybernetics Competition, 2008
- Third prize of the All-Russian School Informatics Competition, 2007