Mikhail Surin

Curriculum Vitae

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Education

2013–2017 Bachelor of Computer Science, Moscow Institute of Physics and Technology (State University), Russia, Dolgoprudny.

Thesis: Jepsen bindings for verification of serializable snapshots

2017–2020 Master of Computer Science, Moscow Institute of Physics and Technology (State University), Russia, Dolgoprudny.

Thesis: Data structures for consensus algorithms on persistent memory

2016-2018 Graduate, Yandex School of Data Analysis, Russia, Moscow.

Experience

2022 - Now Senior software engineer, Yandex, Moscow.

YDB (is an open-source newsql dbms) query processor team.

<u>Duties</u>: worked on query compiler, optimizer and query execution runtime

Achievements:

- o reworked predicate pushdown logic
- implemented automatic secondary inidices usage
- o reworked query execution model for OLTP pipeline
- o added support of 'returing' keyword
- o implemented cpu isolation for user workloads

Technologies: C++, actor model, Python, Go

2019 – 2022 **Senior software engineer**, *Yandex*, Moscow.

yandex base search team.

Duties:

- o developed and maintained lower levels of search runtime, a search index build pipeline and related infrastructure.
- o capacity planning of lower levels of search runtime.
- led a team of 3 developers

Achievements:

- o optimized the document storage which enabled us to grow the search base by 100%
- o reworked an inverted index build pipeline
- o designed and developed a low latency network storage for the search index with erasure coding support.
- o designed and developed a control plane for network storage with support for node/data evacuation and load balancing Key technologies: C++, MapReduce, Linux AlO, io_uring, Python, Go
- 2018 2019 **Software engineer**, *Yandex*, Moscow.

yandex base search team.

2017 - 2018 Software engineer, Yandex, Moscow.

news.yandex.com infrastructure team.

<u>Duties</u>: developed and maintained news scraping robot

Achievements:

- $\circ\,$ designed and developed distributed scheduler for checking news availability
- o designed and developed fault tolerant storage for news documents
- designed fault-tolerant stream clustering service

Key technologies: C++, Zookeeper, Redis, MapReduce

2016 - 2017 Junior software engineer, Yandex, Moscow.

news.yandex.com infrastructure team. 2016 – 2016 **Software engineering intern**, *Yandex*, Moscow.

news.yandex.com infrastructure team.

Awards

2014 IMC – Second prize (107th place)

2014-2015 ACM ICPC Finals - 28th place

Languages

Russian Native speaker

English B2

Spanish B1