Mikhail Surin

Curriculum Vitae

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

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

o implemented automatic secondary inidices usage

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.

o 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 AIO, 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.

 $\underline{\text{Duties}} :$ developed and maintained news scraping robot

Achievements:

o designed and developed distributed scheduler for checking news availability

o designed and developed fault tolerant storage for news documents

o designed fault-tolerant stream clustering service

 $\underline{\mathsf{Key}}\ \mathsf{technologies} \text{: } \mathsf{C} ++,\ \mathsf{Zookeeper},\ \mathsf{Redis},\ \mathsf{MapReduce}$

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

Extra

o 2016-2018 – student at Yandex School of Data Analysis