# Nikita Sivukhin

# Tech Lead

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# Work experience

now ShareChat/Moj, core recommendation system

2022 dec sharechat.com

- Development of cost-efficient ANN-index with 100k RPS throughput and p99 latency below 50ms
- Development of cost-efficient model serving layer based on tensorflow-serving
- Migration of distributed FM training pipeline written in Go from BigTable to Scylla
- Ownership of the recall inference layer in large recommendation system

2022 dec Kontur. Focus, business-partner analysis product

2021 may kontur-inc.com/focus

- Development of a high-performance and memory-efficient subsystem for connection analysis. The core component is the company graph index written in C# with pattern matching search support
- Implemented an in-house streaming for library easy and declarative definition of pipelines. The engine was written in  $\tt C\#$  and supported multi-core processing, state checkpoint and  $\tt LINQ$ -style DSL
- Implemented queue on top of the key-value DB for the durable processing of unreliable data source

2021 may Kontur.EDI, el 2017 sept - Development and

Kontur.EDI, electronic document interchange provider

- Development and maintanence of the service for electronic document interchange with focus on reliability, flexibility and speed of message delivery

- Migrated legacy even-sourcing subsystem which involved live multi-terabyte intelligent data migration and business logic refinements
- Implemented both back-end and front-end components for a subsystem that automates the process of connecting new clients
- Some components I contributed in were open-sourced: GrobExp.Compiler, distributed-task-queue

# EDUCATION & ACHIEVEMENTS

### 2022 Visualized HITB Pro CTF 2022 contest (GitHub)

- Implemented visualization with plain three.js
- Implemented shader for Voronoi-diagram visualization (interior of a cell)
- 2020 Worked on ICFPC2020 online contest infrastructure
  - Integrated the contest system with AWS cloud to provide additional resources for the horizontal scaling of bot battles

#### 2018 - 2020 Master's degree of Mathematics and Computer science

Ural Federal University, Russia

- Joint program with Yandex School of Data Analysis (ML developer track)
- Thesis: Construction of Sparse Suffix Trees and LCE Indexes in Optimal Time and Space (arXiv)

#### 2014 - 2018 Bachelor's degree of Mathematics and Computer science

Ural Federal University, Russia

- Thesis: Compressed multiple pattern matching (arXiv)

2016, 2018 ACM ICPC World Final, Silver and Bronze medal

- 8th place, Ural Federal University team, final scoreboard: icpc.global
- 13th place, Ural Federal University team, final scoreboard: icpc.global
- 2014 International Olympiad in Informatics, Gold medal
  - 23rd place, final scoreboard: stats.ioinformatics.org

### SKILLS

- Solid knowledge of Go language (see open source projects: govanish, gok8sproxy, godjot)
- Solid experience with Cassandra/Scylla, Kafka/RedPanda, Elasticsearch, Redis
  - Identified correctness bug in Cassandra thrift protocol after production incident: CASSANDRA-14812
- Confident use of Kubernetes and Helm
  - Optimized costs for k8s01.24 in GKE with HPA tuning and topology-aware routing
- Passioned about algorithms and data structures, especially compression and compressed data structures
- More than five years of experience and very strong understanding of C# language and .NET ecosystem
- Knowledge of ML concepts: tabular data, NLP, RecSys (from Yandex.Dataschool courses and ShareChat)
- Free use of many tools for daily routines: Python/Jupyter notebooks, Unix tools / shell scripts, docker
- One year of experience as a full-stack engineer working with Typescript, React and webpack
- Solid knowledge of C++ from university courses, scientific work and competitive programming contests
  - See implementation of succinct Aho-Corasick algorithm: Bitbucket