Nikita Sivukhin
Staff Engineer

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WORK EXPERIENCE

now — 2022 dec
ShareChat/Moj, core recommendation system
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 — 2021 may
Kontur.Focus, business-partner analysis product
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 library for easy and declarative definition of pipelines. The engine was written in `C#` and supported multi-core processing, state checkpoint and `LINQ`-style DSL
- Implemented queue on top of the key-value DB for the durable processing of unreliable data source

2021 may — 2017 sept
Kontur.EDI, electronic document interchange provider
- Development and maintenance 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 `k8s@1.24` 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