Aleksey Lobanov

Software Engineer

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Telegram: TODO: Telegram here

▬▬▬▬ Education

2019 – 2021 **Moscow State University**, *Faculty of Computational Mathematics and Cybernetics*, Applied Mathematics and Cybernetics, Master of Engineering (M.Eng.).

▬▬▬▬ Employment History

Jun 2020 – Now **Senior Backend Engineer**, SBERDEVICES, Moscow.

3 connected projects in one big department with overlapping engineering teams.
1. Worked on architecture and MVP for Visper.tech
2. Integrated abandoned ML-solution for video generation to Visper.tech backend.
3. Created and launched widget backend with complex architecture and Python/Golang components. $\geq$ 500k active devices each day and $\geq$ 10k RPS average.
4. Led backend development for news and widget including architecture and tech communications with other teams

Stack: Golang, Python, Django + FastAPI, Postgres, RabbitMQ, Redis/KeyDB, Prometheus + Grafana, Traefik, GitLab CI, Sentry, Docker.

Mar 2018 – Jun 2020 **Python Developer**, KVINT, Moscow (remote work).

Platform for e2e robot calls with call state (we used FSM) and external API calls during call. High scalability and no-code approach for most of functions.
1. Worked on core FSM part, integrated Lua scripting and testing concepts with coverage monitoring.
2. Created from scratch in-place replacement for main dialing component, up to 100 simultaneous calls on each server and millions of calls each month.
3. Was responsible for integration with custom STT (Speech-to-Text) library on CUDA cores. Used C++ for near-zero overhead.
4. Created scalable and fault-tolerant services architecture for most of backend tasks.
5. Integrated custom VAD (Voice Activity Detector) with Websockets, about 80% STT load reduction.
6. Integrated ML pipeline for NLU with custom dictionary and data for each client. Used Google Compute with dynamic instances for about 95% training cost reduction.

Stack: Python + pytransitions for FSM, Websockets, Lua for scenario scripts, C++, Asterisk, MongoDB, MySQL, RabbitMQ, Docker.

Jul 2017 – Feb 2018 **Python Developer**, KRISTA, Moscow.

Telegram chat bot for open data that can understand queries in natural language.
1. Integrated code metrics + static code analysis as part of CI process.
2. Redesigned data process to get measurable results for each commit.
3. Reimplemented queries building process to ML-approach with big step up in performance from about 80% to 98% on test data.
4. Managed tech debt reduction process.

Stack: Python3 + scikit-learn for ML, Apache Solr, Telegram API.

▬▬▬▬ Skills

Languages Python, Golang, C/C++, Lua, SQL

Technologies RabbitMQ, Docker, S3 (including Minio), Prometheus/Grafana, Sentry, GitLab CI, Linux

Frameworks FastAPI, Django, aiohttp, scikit-learn

Databases MySQL/MariaDB, Postgres, Redis/KeyDB, sqlite, MongoDB