

Nick Mazurkin — Software Engineer, Team Lead, Staff Engineer

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Java, Python, Web, DB, No-SQL, Linux, ML, AI, Cloud, K8S

PulsePoint, New York, USA

[PulsePoint.com](#), AdTech, OpenRTB Exchange, DSP, DMP

VP, Data Science, ML and Engineering team (Mar 2025 — PRESENT)

Director, Data Science, ML and Engineering team (Apr 2020 — Mar 2025)

Led a team of 6 data scientists and 3 Java/Python engineers (DSE) working across 5 time zones, responsible for planning, performance tracking, coordination, and agile management. Proven ability to lead and mentor teams, manage projects, and deliver results on time and within budget.

- Successfully delivered 3 new internal services and 5 new ML models as a team leader.
- Successfully completed 20 quarterly plans with the team in research, development, and deployment.
- Successfully migrated all DSE/ML projects to the new data center in 3 months.
- Provided interviewing, on-boarding, and mentoring for new team members.
- Successfully coordinated and communicated with other teams and team leaders on numerous projects.
- Successfully maintained an iterative Agile framework, including scrum, retrospectives, and prioritization of tasks.

Senior Software Engineer with Expertise in Java, Python, and ML (employee, Jan 2019 — PRESENT)

Senior Software Engineer with Expertise in Java, Python, and ML (remote contractor, Feb 2017 - Jan 2019)

Experienced software engineer with a proven track record of developing and deploying high-performance applications using Java, Python, ML, Linux, and web technologies. Expertise in building and scaling distributed systems, implementing machine learning models, and optimizing performance for large-scale data processing.

- Developed an asynchronous web crawler/fetcher for /ads.txt and /app-ads.txt web resources, providing and enhancing transparency and trust for the SSP and DSP partners of our Exchange platform (processing ~500K domains daily, Java, Spring, Netty).
- Developed a supply prediction system for RTB traffic, enabling clients to switch to a cheaper self-serving platform (processing 24M documents daily using Lucene, Spring Framework and ML/CatBoost).
- Implemented a scoring model to effectively throttle proxy processing of incoming supply, selecting only 20% of the most profitable RTB requests and blocking 80% of the least profitable supply. This resulted in a 50% reduction in the number of required servers.
- Designed and implemented a DMP platform using asynchronous Java, gRPC, Cassandra, and Redis. This platform provides the effective solutions for targeting and optimization algorithms, accessing 30 billion entities with a p99 latency of 5ms and a p50 latency of 1ms.
- Developed a standalone service for domain attribution, enabling efficient domain and application bundle targeting (achieving 100k/sec QPS using gRPC and REST).
- Developed a client-side balancing library using the JSQ algorithm and circuit-breakers, significantly reducing client-server communication latency from p95=6ms to p95=1ms.
- Containerized and deployed a cluster of DoubleVerify service instances, achieving 300k/sec QPS in peak. Implemented custom client-side balancing and a low-latency custom client-to-cluster connection HTTP/REST library, enabling faster and easier deployments with efficient access.
- Developed a dockerized test infrastructure for custom configuration of Redis and Cassandra, similar to TestContainers, which facilitated the execution of integration tests.
- Developed a hierarchy of docker images for ~20 projects written in Python, Java, and Jupyter, significantly reducing the time required to create new projects.
- Developed an audience builder for 15 audiences, enabling our client to target very specific audiences with focus either on volume or accuracy (using Luigi, Hive, and ETL).
- Successfully resolved 2-3 support issues daily as part of a periodical 3rd-line technical on-call support rotation.
- Implemented several dozen RTB changes in the application stack, including improvements, new features, deployments, fixes, and monitoring (using Java, Netty, and Linux).
- Developed an engine for internal reports with embedded alerting, enabling transparent and quick monitoring of important pipelines and services (using Python, Hive, Impala, and Jupyter). Created 6 internal engineering reports.
- Implemented 7 ETL pipelines in Python using Luigi, Docker, Hive, and Presto.
- Improved video-completion rate model by making it more accurate and stable (Python, Scikit-learn)
- Implemented and delivered to production the look-alike audience model (Python, Catboost, Luigi, K8S)
- Developed a model to predict the quality of NPI attribution, enabling clients to select the confidence level for HCP targeting.
- Developed a model to predict the quality of ICD10 attribution based on obfuscated and aggregated clean-room prescription data, enabling clients to select DTC audiences based on condition probability.
- Developed a secure facade to access and process obfuscated clean-room data, providing a secure and efficient interface to private data (Python, Flask, Gunicorn, Google Cloud API).
- Implemented and delivered the gender prediction model (Bayes, SQL, Python, Sklearn)
- Implemented the experimental win-rate model for the avails predictor (PyTorch)
- Implemented and delivered the versioned ML model storage (Nginx, Python, Cherrypy)
- Implemented and delivered the app store scraper with embeddings (Python, Docker, K8S, Trino, Pytorch, Optuna, Tensorboard)
- Implemented and delivered the cleanroom prescription visualizer (Python, Streamlit, Plotly, Google Big Query, Google Big Storage)

Deutsche Bank

[Deutsche Bank Technology Center](#), Moscow, RU

Senior Software Java Engineer, AVP (Jun 2016 – Feb 2017)

- Implemented several new algorithms, code and concurrency improvements to the dbCAP project achieving the required performance of the solution (exchange events messaging on Solace System message broker, KDB+, java).
- Successfully implemented the test suite for the legacy projects allowing to extend the life-time and reliability of the legacy projects (process control, runtime log analyzers, TeamCity, environment settings).
- Improved the internal messaging framework based on Solace Systems message broker (achieved up to 160000 messages/sec stored reliably to the disk), introduced solutions for the performance metering.
- Designed and implemented the multithreaded and garbage-less algorithms and structures (Java) for message acknowledgement in complex environments to provide effective processing without long GC pauses.
- Implemented a modern front-end build toolchain for the legacy project, added the required UI features for the project (Angular 2, NPM, RxJs, TypeScript, TSLint, System.js, Rollup, jQuery, Bootstrap).

OK.ru

[OK.ru](#), Moscow, RU, the one of the largest social networks (54 MAU)

Senior Software Java Developer (Oct 2012 – May 2016)

- Implemented a multiple features in the searching infrastructure of the OK.ru service: backend services, data storages, relevancy customization, indexation, replication (Apache Lucene, Spring Framework, Web Services, SQL/noSQL, Linux)
- Fixed multiple legacy issues in L12N infrastructure for the OK.ru service including the resources editor, Java frameworks and workflow process, achieved resource propagation to ~2000 servers.
- Make significant contribution to the moderation and antispam services, architecture and implementation, implemented NSFW detector, spam detector (based on naive bayes detector), UGC filter cluster (near real-time voting-quorum service).
- Successfully designed, implemented and run the MVP for the startup project (Tinder-alike) in very short time (3 months), created the architecture of the service including SOA, custom search service, asynchronous binary client protocol, push service (GCM), photo uploading/processing/distribution service, statistics and analytics (apache netty, apache cassandra, kafka, queues, messaging, mobile apps, python, machine learning).

Education

Mari State Technical University (1994 – 1999)

- Yoshkar-Ola, Russia, "Computing machines, complexes, systems, and networks"
- Engineer (with honors, equivalent to a master's degree)
- Graduation work: "Applying of wavelet transformation to results of gas-chromatography analysis"

Open Source projects

net-crusher (2016)

TCP/UDP proxy library for automated and manual connectivity testing (used by RabbitMQ, Aerospike, Terracotta), more: [project](#), [sources](#), [usages](#)

Resume

The latest and the most detailed resume can be downloaded in different document formats at <https://mazurk.in>