Vitaly Samigullin

A software developer focused on Python, Clojure and DevOps

Interests: anti-fraud, transaction monitoring, security, data analysis, debugging

Tags: Python, Clojure, Postgres, ClickHouse, Linux, Ansible, Docker

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Links:

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Summary

- 10 years of Python: Flask, Aiohttp, Django, SQLAlchemy, Pytest
- 4 years of Clojure
- Databases: PostgreSQL, MySQL, ClickHouse, BigQuery
- Infra & DevOps: Linux, Nginx, Ansible, Docker
- Open-source: pydantic contributor (20k+ stars), pip-license-checker author (280k+ Docker Hub pulls)

Experience

Jan 2024 — present: Senior Software Developer @ Locoia

Low-code automation platform with the visual programming environment. Some parts are legacy-heavy with little or no code coverage. The main objective is to make the code more straight forward, maintainable, extensible, so that the new features can be delivered quicker even with the limited human resources.

- Performance issues research (design document): found various bottlenecks for both IO-bound and CPU-bound tasks
- Introduced task execution timeouts using Python's `concurrent.futures` and process pool executor
- Introduced a new framework for integration testing, increased code coverage
- Various legacy code refactorings to increase readability and maintainability
- Active bugs reporting and fixing
- Developer experience: made debugging with Sentry much easier by adding extensive exception context, simplified docker compose configuration, improved performance, made local developer setup closer to staging by improving database Docker image and the app initialization scripts, improved DB migrations

Jul 2019 — Jul 2023: Senior Software Developer @ ANNA Money

Developed transaction monitoring system from a greenfield project to a mature in-house solution. Wore many hats: software developer, platform engineer, technical leader, team leader/technical product owner.

Software developer & Technical leader

- Migrated transaction monitoring (TM) monolith to microservice architecture (processing time reduced from 30m to a few seconds)
- Developed an API for the interactive evidence-collecting chat form for the mobile app (not a single glitch for years in prod)
- Reverse-engineered a badly documented third-party API for a rule-based system in Lisp dialect
- Implemented monitoring and alerting for backend services
- Set & enforced standards for coding style and code coverage with tests (code coverage 94%)
- Optimized Docker images (build time reduced 3x, image size reduced 2x)
- Developed CI/CD pipelines & DevOps tools used across the company
- Found & fixed a security vulnerability in the major infrastructure service
- Implemented automated license compliance checks for open-source dependencies across the company

Technical product owner & Team leader

- Led a cross-team development of the dynamic, evidence-based risk scoring system tailored to business categories (reduced workload by 49%, didn't compromise security)
- Designed a variety of rules for the rule-based TM (made the company compliant with regulations, and addressed risks across the whole fraud typology)

- Designed evidence collection mechanism (increased share of documents collected by 30%, reduced avg collection time 2x)
- Designed the SAR reporting mechanism (reduced manual work from 30 to 2 min per report)
- Improved trusted counterparty filtering mechanism (reduced false positives for international payment checks by 30%)
- Hired 5 team members (tech & culture fit interviews), managed a team of 7 (backend, frontend, data science)
- Organized scrum processes

Jan 2019 — Aug 2019: DevOps Engineer @ contracting project

- Developed and maintained cloud infrastructure for a few small-sized projects (k8s, ELK, Grafana, Prometheus, container registry on DigitalOcean)
- Containerized Python application
- Configured CI/CD (TravisCI, CircleCI)

Feb 2017 — Jan 2019: Python developer @ Rambler & Co

Backend developer & team lead roles in the big data project for web analytics.

- Developed a ClickHouse SQL query generator from scratch for a new real-time web analytics service
- Wrote documentation for the service people used long after I left the company
- Dockerized services
- Implemented customers invitation mechanism using JWT
- Migrated tests from using a shared DB to a Docker Compose service DB, reduced tests running time significantly
- Configured GitLab CI for the project
- Migrated all projects from Python 2.7 to Python 3.6
- Started migration to Kubernetes infrastructure
- Rewritten a huge legacy project nobody touched for years
- Improved service performance via SQL queries optimisation and caching (latency decreased 2x, hardware resources downgraded to 4x fewer cores and 8x less RAM)
- Planned MySQL to PostgreSQL massive migration (3400+ tables, hundreds of GB volume) with no service downtime (but a read-only mode for a few night hours)
- Introduced monitoring to API services with Prometheus and Grafana
- Implemented automation for launching and monitoring auto testing and load testing for a real-time web analytics service
- Done 35 technical interviews for my team and others

2014 — 2016: contracting projects

Various contracting project for SME:

- Developed chat bots (Python, Telegram API)
- Developed a social blogging platform (Python)
- Developed landing pages (PHP, jQuery)
- Developed a e-commerce website, design and a payment plugin (Webasyst Shop-Script, Twitter Bootstrap, PHP)
- Data analysis and social mining (Python, bash, awk, sed, Twitter API, VK API)
- Publishing automation (LaTeX)
- Linux system administration (setting up and maintaining web servers, mail servers, firewalls)

Education

Information Security, Specialist, Ufa State Aviation Technical University, 2003 — 2008