Roman Voropaev

Software Developer/Researcher

PROFESSIONAL SUMMARY

- Senior Software Engineer with 7+ years experience in enterprises and startups and strong computer science background. Participated in different areas from telecom & banking to quantitative finance and poker AI. But mostly Django WebDev, later FastAPI.

- I'm devoted to high quality code and respect of Zen of Python/Go, so I love simple, robust and scientifically repeatable solutions. I like exploration and experimenting with technology limits.

- I understand business needs and know that sometimes technical problems can be solved without writing any lines of code…

TECHNICAL SUMMARY

Languages:	Python3, Golang, Swift
DBMS:	Postgres, Sqlite, Redis, Mongo
Backend:	Django/DRF, Flask, FastAPI/Starlette
Frontend:	React, iOS native
Methodologies:	Unit & Functional Testing, CI/CD, Design Patterns, Agile
Version Control:	Git
Platforms:	Linux (Debian|Arch), OS X

KEY TECHNICAL SKILLS

SKILL

Python, Django

- From classic monoliths with Django templates to modern rest services with Django Rest Framework and Flask
- Custom management commands
- Websockets via Django Channels
- WSGI/ASGI servers (Gunicorn, uWSGI, Uvicorn, Werkzeug)
- Complex Django admin site customizations
- Raw SQL queries and complex model filters
- Token authentication and authorization with CORS
- Unit Testing (Django Tests, pytest, freezegun)
- Postman API collections with tests
- Deployment via Fabric, Ansible
- Google apis (FCM, Maps) integration, SMS gateways
- Card payments integration via bank/gateway APIs
- Documentation generators (Swagger)

JavaScript

- ES6 and JSX
- React with 3d-party components
- AJAX and SPA using Fetch API
- Modular JS applications development using bundlers

Databases:

- Postgres
- Database design with normalization
- Complex Django migration scripts
- Triggers and views development
- Using extension such as pg_trgm, earthdistance
- Array, Hstore and JSON data types usage
- DB administration and backup
- Non-production experience with Mongo

Cloud Services

- Digital Ocean
- AWS EC2
- Azure

Development methodologies

- Agile
- Scrum
- Object-oriented programming in Pythonic way
- Unit testing
- Code reviews
- Continuous Delivery

Version control

- Git, Mercurial
- SVN

Artificial Intelligence

- Neural Networks (including recurrent and convolutional)
- Data Processing: Numpy, Pandas, Matplotlib, Jupyter
- Frameworks: Keras, PyTorch
- Reinforcement Learning (self-playing agents and game theory)
- NLP algorithms

CERTIFICATIONS

- [Machine Learning (first course of Andrew Ng)](#)

- [Pattern-Oriented Software Architectures for Concurrent and Networked Software](#)

- [Functional Programming Principles](#)

- [Design of Computer Programs](#)

- [Artificial Intelligence for Robotics](#)

PROFESSIONAL EXPERIENCE

SberCloud, Oct 2021 — May 2022
Senior Python Developer
Projects:

- *Code generation tool from OpenAPI/Swagger*
  Internal tool to generate gateway proxy service from documentation of other services.
  Made playable prototype in a month, but later declined by my boss.
  That was my personal project and I've chosen other open source project of OpenAPI parser/
  codegen as a starting point.

- *DataHub & DSWorks integration (*https://docs.sbercloud.ru/aicloud/mlspace/concepts/deployments__working-with-models__build-image-deploy.html*)*
  DataHub is external service made by other team, containing "custom" ML images, uploaded by users. Worked in close cooperation to introduce availability of these images in *"Deployments"* section of AICloud/MLSpace.
  DSWorks is also other team, making data science hackathons on the MLSpace base.
  Each such event required customizations in the platform to open new pre-trained models such as RuDalle to the public + balance honestly computational resources between participants.

- *Urgent update of global OAuth scheme to pass a security audit (*https://docs.sbercloud.ru/aicloud/mlspace/concepts/api__auth.html*)*
  The idea was to use special service accounts tokens with restricted access for API call made by users. Security team required us to stop using straight login/password, but implement something similar to GCloud.
  The task was fully formulated only few days before the audit, so required overwork, that was quite stressful.

- *Transfer of "micro" service from Flask to FastAPI*
  Actually this service, being only proxy to other services, was so huge that we had to maintain both versions, migrating exposed methods slowly to the newer one. I had fully deployed new version to the Kubernetes cluster by myself.

QuantumBrains, Mar 2021 — Sep 2021
Senior Python Developer
Projects:

- *Trading Accountant Service*
  Internal project for cryptocurrencies trading units: checking reported PnL via direct REST communications with 17 largest crypto-exchanges (Binance, Coinbase, Kraken and more). Maintaining & Refactoring low quality codebase written by domain expert. Test coverage and CI integration. Starting new "realtime" version based on Websockets.
  Reviewing junior code.

- *Slack EasyTransfers bot*
  Internal project for coin transfers between exchanges accounts/trading units.
  Actual transfers done manually by operators, receiving commands in slack from this bot. Slack

UI allows rich message formatting, including buttons for actions, such as transfer cancel or approval.

1Win, Oct 2020 — Feb 2021
Backend Developer
Projects:
- *Fortune Wheel (*1win.global*)*

    Backend app for classic roulette-style online gambling. Working with random.org services, FastAPI, asyncio, redis queue, etc. Domain-driven design from scratch in close cooperation with team lead. Full-scope scrum process with retrospectives, planning poker and all agile.

COVID19 Quarantine, Apr 2020 — Sep 2020
Developer, studied Golang & Swift, Docker & Kubernetes (pluralsight.com)

Gearheart, Apr 2019 — Apr 2020
Backend Developer
Projects:
- *Oxygen Bank (oxygenbank.com)*
    Oxygen is «the fresh new bank account for free thinkers, rebels and entrepreneurs. Awarded Best Digital Banking Account* in the US, we look after people who want to rise above»
    Technically just very big gateway for >10 other banking services (card processing, risk management, loans, international transfers, etc). Even though most of them duplicated, some services were constantly failing. Seems like finance industry is not so reliable as we think…
    Native apps were developed by other company, so there were some communication issues.

    Personal results/ Responsibilities :
    – DRF endpoints, integration of many 3d-party services to internet banking project
    – Intensive daily communication with QA specialist
    – Virtual cards and Apple pay integration (card tokenization) via Galileo card processing
    – Implementation of card limits system - daily, weekly, single-use cards
    – Acceleration of big Django tests suite from 5 min to 3 min
    – Addition of type annotations in large codebase
    – Deployment to production and staging
    – Massive updates of icons and images from designers

Pena, Jan 2018 — Apr 2019
Lead Backend Developer
Projects:
- *Pena Mobile Application (penawash.com)*
    Pena is an Uber-like application for carwash services booking. Project consists of two parts:
    1. mobile application for car owners
    2. CRM/accounting system for carwash operators and owners
    User registers in application via phone (OTP code), enters their car information (because prices and durations of services depend on car body type). There is quite complex carwash ranking logic that determines order of booking trials on different carwashes. The novelty of this application is rigid responsibilities of carwashes based on money penalties and premiums for operators.

The second part is web application for order management and execution on the carwashes. After login, operators of carwashes are able to accept orders, change their execution time and manage their load in simple, intuitive UI, similar to Kanban tables.

Personal results/ Responsibilities :
- Developed backend architecture incrementally from scratch
- Gathered sophisticated and sometimes contradictory requirements during in-person scrum meetings with real business owner and other developers
- Integrated many 3d-party services, such as sms gateways, push notifications and payments
- Refactored application code numerous times to make it scalable and readable by other developers
- Established simple but effective development process with CI on BitBucket, allowing to fix bugs as quickly as possible
- Wrote most of documentation in the project wiki
- Transferred lead backend role to other developer

Grand Capital, Jul 2016 — Dec 2017
Senior Software Developer
Projects:
- *Uptrader (uptrader.us)*
Uptrader is a web application for simplification of working with MetaTrader4/5 and providing better UI to new forex customers. MT is currently the industry standard for running Forex brokerage. It is big, slow Windows-based(!) application with very non-standard binary APIs painful to use and implement. The goal of project was to abstract these technical difficulties from new Forex brokers all over the world, who just bought expensive MT4 license and wants return on their investments…

  Personal results/ Responsibilities :
  - Developed RESTful services and python bindings to binary APIs
  - Development of web trading terminal
  - Investigating incidents & complex bugs on the production servers of client brokers with logs and imagination
  - Integrated many 3d-party services, such as sms gateways, push notifications and payments
  - Refactored application code numerous times to make it scalable and readable by other developers
  - Established basic CI and dev-ops processes for new client brokers
  - Mentoring and code reviewing 2 junior developers, team-building

- *The Main Company Site (grandcapital.net)*
Grand Capital is Russia-based international Forex company. It has small but numerous offices in many countries (especially Asia and Africa). Main company site were constantly changing to offer numerous bonuses and promotions for new customers.

  Personal results/ Responsibilities :
  - Teached HTML coders and designers to work with git and change Django markup without fear
  - Investigating incidents & complex bugs on the production server with logs and imagination

– Integrated many 3d-party services, such as sms gateways, push notifications and payments
– Refactored application code numerous times to make it scalable and readable by other developers
– Established basic CI and devops processes

Alfad, Jun 2015 — Jul 2016
Lead Backend Developer
Projects:
* *Alfad (Alpha-Advertisement) Application (now closed)*

  Alfad was a social network (*vk.ru*) advertisement automation system. The idea was to fully automize advertisement publication in many market channels at the same time. That means creation of integrated/organic ads exchange.

  Personal results/ Responsibilities :
  – Developed backend architecture incrementally from scratch via Java/Kotlin and Spring
  – Gathered requirements during in-person scrum meetings with real business owner and other developers
  – Integrating social network APIs

T-Systems, Oct 2014 — May 2015
Junior Web Developer
Projects:
* *T-Mobile customer cabinet (support.t-mobile.com)*

  T-Mobile is one of the largest mobile operators in Europe, especially in Germany. Our team consisted of 50+ (developers, managers, testers, analytics), partially located in Saint-Petersburg office, partially in Frankfurt office. E-care is one small part of whole telecom support system, providing services such as cellphone tariff changes via web portal.

  Personal results/ Responsibilities :
  – Learned to work in distributed team
  – Basic web development with J2EE (without changing architecture or serious business logic)
  – Partially adopted application pages for disabled/blind people (Web-accessibility)
  – Developing and running Selenium tests, investigating fails
  – Writing documentation

PERSONAL PROJECTS

* *Ricksay*
  Cross-platform tool with funny quotes from Rick & Morty.
  https://github.com/roma-guru/ricksay
* *TurboPython*
  TurboPascal but for Python!
  https://github.com/roma-guru/turbo-python
* *Flickpyper*
  Cross-platform tool to load fresh wallpapers from Flickr.
  https://github.com/roma-guru/flickpyper

- *Hardgain*

  Web application for tracking gym achievements and progress.
  Django backend & React frontend.
  https://github.com/roma-guru/hardgain
  https://github.com/roma-guru/hardgain-web
- *Pair Trading*

  Research on Pair Trading on Russian stocks & currencies market.
  https://github.com/roma-guru/PairTrading
- *Transaq Connector*

  Python bindings for Transaq trading API (used by Russian stock brokers).
  https://github.com/roma-guru/transaq_connector
- *Pokerstars Texas Holdem Bot*

  Fully functional poker adviser based on great research made by smart Canadians.

EDUCATION

Saint Petersburg State University
Master's Degree of Computational Physics

LANGUAGES

- English B2
- Spanish A2

HOBBIES

- Sailing
- Reading
- Hiking
- Travelling
- Cooking