Zakharov Julustan

Data Analyst | Data Engineer

Contact

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Github

Projects

→ SQL DML + Dashboards

→ Applied Exploratory Analytics

Languages

English – B2

Russian – Fluent

Yakutian – Native / Fluent

Summary

Data Analyst and Engineer in IoT and Industrial Automation. Experience in developing ETL pipelines, designing data marts, and building analytical services. Core responsibilities: data aggregation and analysis, KPI and anomaly calculations, real-time monitoring, A/B testing, automated reporting, database design, and SQL query optimization. Academic background in mathematical modeling with teaching experience.

Work Experience

- **SmartOm** 2023-present **Data analyst | Data Engineer (IoT)**

- Designed ETL scripts in PySpark for outlier filtering, smoothing, and aggregation of time-series data, as well as preparing datasets for analytical dashboards and services.
- Built and maintained standardized analytical dashboards in OLTP/OLAP databases for KPI calculation, anomaly monitoring, and aggregation by devices, assets, and geolocations.
- Developed and deployed 10+ analytical services for IoT systems (Django DRF + PyData stack), including:
- Cost Reduction Estimation Service: Estimated heating cost savings using a temperature-based model, time series data, and dynamic pricing.
- Circulation Fault Diagnostics: Analyzed deviations in temperature-hydraulic profiles to detect failure patterns and trigger real-time alerts.
- Real-time Comparison Module: Compared actual vs. expected heating load values in real time.
- Conducted A/B testing with product teams: defining primary/secondary metrics, measuring impact, interpreting results, and providing production recommendations.

- **SmartOm** 2021-2022 **Software Engineer**

- Contributed to the design of database architecture and microservice logic for scalable IoT platforms, document management web services, and industrial task tracking systems.
- Optimized data workflows: indexing strategies, table partitioning, and SQL query performance tuning.
- Developed and maintained backend services for IoT data ingestion and processing via MQTT (Python, Django, PostgreSQL).
- Implemented digital twin functionality in an industrial system (3D visualization, object versioning, digital signatures).
- Designed a task scheduler for IoT systems (client-server architecture).
- Participated in requirements analysis, technical specifications, and solution design.
- Author of registered software: Smart system monitoring and management platform (certified by Rospatent).

Academic & Teaching Experience

- **North-Eastern Federal University** 2019-2023

Institute of Mathematics and Information Science – PhD program: Mathematical Modeling, Numerical Methods, and Software Complexes

- Participated in applied research in physical process modeling: material anisotropy, electromagnetic wave interaction, etc. (PyData stack, FEniCS – Finite Element Method for PDEs).
- Developed and taught courses: Internet of Things, C++ Programming.
- Provided academic mentorship for student projects presented at national and international conferences and seminars.

Education

- **North-Eastern Federal University**

2014-2018

B.Sc. – Institute of Physics and Technology: Radio Engineering for Signal Transmission, Reception, and Processing

2018-2020

M.Sc. – Institute of Physics and Technology: Information Security in Communication Channels

2020-2024

Ph.D. studies – Institute of Mathematics and Information Science: Mathematical Modeling, Numerical Methods, and Software Complexes

Additional Education

- Samsung IoT Academy
- Karpov Course:
  - SQL
  - Advanced Data Visualization in Tableau

Technical Skills

Data Processing

- Python, PyData Stack (NumPy, Pandas, SciPy, Statsmodels, Scikit-learn, Matplotlib, Seaborn), PySpark, SQL (DDL, DML, DCL, TCL)
- Databases:
  - OLTP: PostgreSQL, TimescaleDB, MySQL
  - OLAP: ClickHouse, Google BigQuery
  - NoSQL / In-Memory: MongoDB, Firebase, Firestore, Redis
  - BI Tools: Redash, Tableau

Web & Backend

- Django, Django REST Framework, MQTT, Kafka, Docker, requests, aiohttp, REST API
- Data Streaming / Messaging:
  Kafka, MQTT, Redis Pub/Sub

Dev Tools

- Git, Linux, Docker Compose, Jupyter, VS Code, Bash