

MIKHAIL

Austria Vienna

MACHINE LEARNING & OPERATIONS ENGINEER

Results-driven Machine Learning Operations (MLOps) Engineer with 8 years of experience in automating and optimizing machine learning pipelines, systems administration, and Python development. Strong expertise in building robust, scalable, and secure infrastructure for ML applications. Proven ability to architect and deploy CI/CD pipelines, manage cloud environments, and develop software solutions that bridge machine learning and production environments.

SOFT SKILLS

Team Leadership
Project Management
Mentoring

Customer Communication
Financial Analysis
Financial Reporting

German
English
Russian

TECH COMPETENCIES

- MLOps & DevOps: CI/CD, Kubernetes, Docker, Terraform, Jenkins, MLflow Cloud
- Platforms: AWS, Google Cloud, Azure, OCI
- Automation & Orchestration: Ansible, Terraform, Kubernetes, Helm, System
- Administration: Linux, Networking, Security
- Programming & Scripting: Python, Scala, SQL, Bash, C
- Machine Learning Tools: TensorFlow, PyTorch, scikit-learn, Keras, Jupyter, Spark ML-lib Database
- Management: PostgreSQL, MySQL, MongoDB, Redis, Delta Lake
- Monitoring & Logging: Prometheus, Grafana
- Testing & Quality: Unit Testing, Pytest, Code Reviews

PROFESSIONAL EXPERIENCE

Itidea Solutions
Lead MLOps Engineer

2022 - 2024

- **Leadership & Coordination:** Led a team of ML engineers and developers to deliver cutting-edge ML solutions, including managing cross-functional collaboration and mentoring junior team members. **Project Ownership:** Spearheaded the development of an ML model for trading bots (NumPy, Pandas, TA-lib) and computer vision applications using PyTorch and TensorFlow, from data preparation to model deployment.
- **Synthetic Data Generation:** Created synthetic, semi-synthetic, and real datasets for computer vision models, automating the annotation process using analytic geometry and Albumantation.
- **Cloud Infrastructure & Model Training:** Designed and managed cloud solutions on AWS, GCP, and OCI for model training, including setting up environments and overseeing the training pipeline.
- **Data Pipelines:** Developed ETL pipelines using Spark to integrate data from multiple sources, stored in cloud-based databases such as DeltaLake, PostgreSQL, MySQL, SQLite3, and Redis. **Automation:** Automated the deployment of cloud resources and Jupyter Notebook servers for data scientists, using Bash, Tmux, and SSH for seamless integration and access.

- Team Leadership & Mentoring:** Led a team of 5 developers, setting project goals, assigning tasks, and ensuring timely delivery of software solutions. Fostered a collaborative environment, coaching junior developers on best practices in Python development, data management, and cloud infrastructure.
- Full-Stack Development:** Architected and developed full-stack Python applications, with an emphasis on backend services, using frameworks such as Flask and FastAPI, integrated with cloud-based databases like MySQL and MongoDB.
- Automation & CI/CD:** Designed and implemented automation tools to streamline development workflows. Set up CI/CD pipelines, reducing deployment times and improving code quality.
- Cloud Infrastructure & Security:** Managed cloud servers on AWS, ensuring system stability and performance through monitoring and the implementation of firewalls, VPNs, and secure access policies (SSH, key management).
- Code Quality:** Ensured high standards for code quality by establishing robust code review processes, implementing unit testing strategies, and maintaining security best practices in Python development.

- Infrastructure Engineering:** Deployment of local hardware solutions optimizing network configurations and subnet integrations.
- Data Readiness & Automation:** Server room infrastructure management, Managed Dockerized applications.
- Database Management:** Optimized SQL and NoSQL databases (MySQL, Redis, MongoDB) for efficient storage and data retrieval, while implementing system backup and recovery strategies to ensure data integrity.
- System Troubleshooting:** Utilized advanced Linux CLI tools to diagnose and resolve complex system issues, optimizing system performance and ensuring continuous uptime.

SELECTED PROJECTS

- Financial Data Analysis Platform**
 - Role: Cloud Computing Specialist & Data Engineer
 - Technologies: Python, Spark, DataBricks, Pandas, Docker, NLP, transformers, BERT Overview:
 - Developed a cloud-based platform for financial dataset analysis, integrating ETL pipelines for data aggregation and analysis, optimizing cloud resources to reduce costs.
 - Result: Provided investors with simplified, aggregated insights, allowing them to make quicker, data-driven decisions. The platform accurately flagged 83% of questionable financial information based on subjectivity scores, helping to identify potential inconsistencies while highlighting reliable data.
- Large Language Model Integration for Language Learning Application**
 - Role: MLOps Engineer / AI Specialist Technologies:
 - GPT-3, Python, MySQL, Redis, AWS
 - Overview: Led the integration of GPT-3 into a language learning app, optimizing prompt engineering for personalized tutoring experiences. Managed the cloud infrastructure to support the app's scalability and security.
 - Result: Increased user engagement by 36%, with users staying longer in the app after the integration of the AI-driven personalized tutoring system, enhancing overall learning experiences and user satisfaction.

- **Automated Engraving Process Optimization**

- Role: MLOps Engineer
- Technologies: Python, PyTorch, Oracle Cloud, Spark
- Overview: Led the development of an ML model to automate the engraving process with object recognition and parameter prediction, reducing manual intervention by 90% and improving accuracy.
- Result: Reduced operator intervention by 98% and improved engraving accuracy with real-time ML-driven object recognition. This optimization led to a 1200% increase in net profit by cutting operational costs, reducing production time, and enabling the system to be deployed in automated manufacturing environments.

- **Auto-Scaling Web Application**

- Role: Solution Architect
- Technologies: Python (asyncio, threading, concurrent.futures), IPC, Cloud Environment Overview:
- Developed a dynamic, modular app that supports adding and removing features at runtime, with real-time task management and monitoring. Implemented a system that uses asynchronous and thread task queues, inter-process communication (IPC), and advanced threading techniques to optimize resource usage, ensuring scalability and reliable performance. Result: Created a highly scalable, modular platform for small businesses, enabling them to add new functionality with minimal code and without deep technical knowledge. The system reduces development costs for about 80% by simplifying complex tasks like threading, concurrency, and database management. Its ability to integrate new modules without downtime makes it reliable for businesses, and it's especially valuable for novice developers.

EDUCATION

Economics and accounting (College)

Moscow State University of Economics, Statistics, and Informatics
2014 - 2016

Finance and banking (Bachelor)

Plekhanov Russian University of Economics
2017 - 2019

International business management (Bachelor)

University of Vienna
2021 -
