

Stanislav Smirnov

Senior Data Scientist | Machine Learning Engineer | Product

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Summary

Senior Data Scientist specialising in Payments Optimisation, Routing & Orchestration and ML-driven decline reduction in e-commerce/fintech. I combine DS/ML depth with product thinking to improve authorisation success, PSP routing performance and payment risk posture.

Technical Skills

- **Programming Languages:** Python, PySpark, SQL
 - **Machine Learning & AI:** Classical ML (Regression, SVM, Decision Trees, Boosting etc), Deep Learning (CNNs, LSTMs), LLMs
 - **Cloud Platforms:** AWS, Azure
 - **Data Engineering:** Data Warehouse Design (including Data Vault 2.0), ETL Development
 - **Tools & Technologies:** Airflow, Git, FastAPI, Docker
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Professional Experience

Cleverbridge AG *Cologne, Germany / Hybrid*

Senior Data Scientist *April 2024 – Present / Cologne, North Rhine-Westphalia, Germany · Hybrid*

Payments Team – Payment Routing & Orchestration

- **Impact:** Improved payment re-routing success by ~4x (2–3% -> ~11%) and recovered revenue by ~3x by redesigning fallback logic for NA traffic.
- **Dynamic Retries:** Owning the evolution of the ML system, extending coverage to new decline categories and use cases.
- **Strategy:** Analyzing BIN-level and regional authorisation patterns to identify weak routes; exploring tokenisation performance to inform future routing strategies.
- **Leadership:** Bridging payments PM, engineering, and data to prioritize ML initiatives with high business impact.

Data Scientist *December 2021 – April 2024 / Cologne, North Rhine-Westphalia, Germany · On-site*

- **Product Development:** Originated and led Dynamic Retries (payment recovery) from idea -> PoC -> production, achieving 25–50% higher success rate for in-scope retries.
- **Churn Reduction:** Designed the ML framework for CleverAutomations, building predictive models (SageMaker) and workflows (MWAA) to identify at-risk customers.
- **Tech Stack:** Implemented scalable solutions using Python microservices, AWS SageMaker, and MWAA.
- Dynamic Retries Blog Post

Data Engineer September 2019 – December 2021 / Cologne Area, Germany ·
On-site

- **Data Warehouse:** Led design/implementation of a scalable Data Vault 2.0 warehouse on Azure, enabling self-service analytics.
 - **Engineering:** Built optimized ETL pipelines (Azure Data Factory, Databricks) and Python microservices/Airflow workflows containerised with Docker.
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Education

Master of Science in Electrical Systems Engineering University of Paderborn, Germany (2015 – 2018)

- **Specialization:** Signal Processing
 - **Thesis:** “Enhancing Object Detection in Fine Art Paintings Using Deep Learning Techniques”
 - Developed a custom CNN model that improved detection accuracy by 18% over existing methods.
 - **Research Assistant Positions:**
 - Worked on statistical image processing, modeling plasmonic nanoparticles in COMSOL, and programming Lie groups in GAP.
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Publications & Certifications

- **Publications:** “Deep Learning for Object Detection in Fine Art Paintings” (IEEE, 2020), “Nonlinear Dielectric Properties...” (Acta Materialia, 2021).
 - **Certification:** AWS Certified Cloud Practitioner
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Languages

- **Russian:** Native | **English:** Fluent | **German:** Intermediate (B2)