

# 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.

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## 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)