IGOR NIKOLAIENKO

AI/ML Solution Architect

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Cologne/Germany

Dedicated to the field of data science and engineering, my recent work has revolved around designing advanced data solutions aimed at preventing fraud and detecting anomalies in logistics operations, showcasing my commitment to impactful outcomes. I bring experience in providing advisory services and architectural design for ML and AI use cases.

This involves carefully navigating the technological landscape to select appropriate tools and construct prototypes for thorough validation. Notably, my perspective extends beyond backend considerations, incorporating frontend elements with the aim of delivering comprehensive, end-to-end solutions for both cloud and on-prem environments.

WORK EXPERIENCES

Solution Architect / Data Scientist & Engineer

Quality Intelligence Department | Deutsche Post | 2020 - Present | Cologne

- Building AI/ML prototypes and algorithms
- Setting up data infrastructure and pipelines
- AI/ML use case validation and tech-checks
- Conceptualization, implementation, and support of AI/ML services
- Identifying trends, generating insights and validating hypotheses

Automation Designer / RPA Developer

GBS Digitilization Programm | Deutsche Post | 2018 - 2020 | Cologne

- Estimating, designing, and developing robotics process automations (bots)
- DevOps for machine learning implementations
- Presenting applied digitization solutions at IT events

BI Consultant / Data Analyst

Finance Operation & Controlling | Deutsche Post | 2014 - 2018 | Cologne

- Designing data warehouse architecture and ETL processes
- Automating, standardizing, and optimizing management reporting
- Analyzing financial data anomalies

Data Analyst / IT-Project Manager

DHL Freight | 2011 - 2013 | Bonn

- Implementation of accounting and logistics data migration
- Operational and management reporting of logistics products

PROJECTS

Shipment theft ML prediction

2022-2023

The implemented machine learning solution provides early predictions of theft cases within parcel centers and during container transportations. Transportation and liability data are sourced from various data warehouse silos and systems. ML classification of fraud/non-fraud classes is based on several sub-task pipelines and features, such as clustering of customers, goods, value groups, NLP analyses of stolen goods descriptions, and other transportation metrics. The final prediction is carried out via an API call to DataRobot AutoML, where the trained model is located. I developed the end-to-end solution, which includes Python data engineering and AutoML modeling, with the assistance of business counterparts as for feature concepts and results validation. The daily predictions serve as the source for generation of security tickets, which are then used for further theft investigations by internal detectives.

Cash-on-delivery anomaly detection

2022

The objective of the project was to develop a system that could identify fraudulent activities associated with cash-on-delivery shipments, thereby mitigating direct financial loss. My solution involved implementing an anomaly detection system that utilized rule-based detection logic embedded into Python code above SQL data warehouse pipelines. The system successfully identified regional sites that indicated fraudulent activities, enabling security detectives to take prompt action. Within the first three months of providing these data to security detectives, we witnessed the successful investigation of seven cases, which included both individual criminals and organized criminal groups.

Liability scorecard of a company division

2021-2022

The aim of this project was to develop Tableau dashboards that could effectively visualize the company's liabilities pertaining to damage and missing shipments, with the goal of detecting negative trends in liabilities by site, logistics process segment, and product. During the course of the project, I created a suite of dashboards that were fed by advanced SQL pipelines. One of the major accomplishments of this initiative was the creation of a common source of truth that was accessible to management and hundreds of internal users across the organization.

CERTIFICATES

Microsoft Certified Azure Solutions Architect Expert

Google Cloud Professional Data Engineer

Professional Scrum Master

SKILLS

GenAI/RAG/Fine-turning

ChatGPT API/OpenAI

Google VertexAI API/Bard

Azure Cloud/Google Cloud/Terraform

Python/Spark/SQL/

Tableau/SAP BW/PowerBI

Apache Airflow/Linux/Bash

Machine Learning

Anomaly Detection

AutoML DataRobot

Regression/Classification

NLP/Clustering/Deep Learning

CI/CD GitHub

JavaScript/HTML/CSS

EDUCATION

Data Science DHL Programm
Maastricht Open Universiteit
2021 - 2021

Bachelor of Business Administration
Berlin School of Economics HWR
2008 - 2011

Master
Automatic control systems
Faculty of Airspace Systems
Kyiv Polytechnic Institute
2002 - 2008

LANGUAGES

German, English (Professional)

This ensured that everyone had access to the same data and insights, thereby improving decision-making capabilities and enabling more effective measures to be taken to combat losses.

Ukranian (Native)

PERSONAL DATA

born in Ukraine, 1985

2 children

German citizenship