



VP Bank Group uses fuzzy payment screening with machine learning to produce better-quality hits while cutting its workload in half.

Modern payment screening aided by artificial intelligence:
VP Bank Group is steadily reducing the volume of hits while improving their quality and halving its workload.

Success Story

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VP Bank Group uses fuzzy payment screening with machine learning to produce better-quality hits while cutting its workload in half.



The Task

- Update sanctions list screening in payment transactions
- Replace exact searches with fuzzy matching

The Process

- Calibrate the system through effectiveness tests conducted by external consultants
- Carry out efficiency testing through ACTICO based on historical transaction data
- Project duration: 7 months

The Result

- Clear improvement in quality of hits
- Significant reduction in workload for VP Bank Group

VP Bank is one of the top Liechtenstein-based banks. In addition to its head office in Liechtenstein, VP Bank Group has subsidiaries in Switzerland, Luxembourg, the British Virgin Islands, Singapore and Hong Kong. It has 65 years' experience in private banking.

How the project team is updating sanctions list screening in payment transactions

Faced with mounting pressure to meet ever-stricter compliance rules, banks are looking for intelligent payment screening solutions to help them accurately identify risks without increasing the work and costs involved. VP Bank Group has been working with software developers ACTICO to install a new payment screening system. It decided to adopt a new approach based on ACTICO Machine Learning. This has significantly improved the quality of payment screening, and especially fuzzy matching. In parallel, it has halved the workload of payments staff, who act as the first line of defence. The number of cases referred to the compliance team remained stable.

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Increased quality of hits combined



with 50% reduction in the workload of the payments department.

High Demands On Effective Payment Screening Systems

Payment screening is one of the tools that banks use in the fight against money laundering. A screening system looks at incoming and outgoing payments and checks the data against sanctions lists and blacklists. The aim is to ensure the bank identifies risks in good time and adheres to compliance regulations.

A review of the payment screening system used at VP Bank Group revealed that it no longer met the current requirements for fuzzy matching. In this context, fuzzy matching means that it should still be possible to identify risky transactions even if the name in the transaction does not exactly match the name on the sanctions list, perhaps due to typing errors, reversal of first and last names, or even deliberate misspellings.

Fuzzy Matching And The Problem Of Efficiency

A fuzzy search always produces more hits than an exact search because fuzzy matches are detected in addition to exact matches. This increases the workload of payment and compliance teams, as they have to clarify each hit manually. As a result, there is always a trade-off between effectiveness and efficiency. This means:



finding as many risky transactions as possible (effectiveness)



finding the least possible transactions that, on closer inspection, turn out to be innocuous (efficiency).

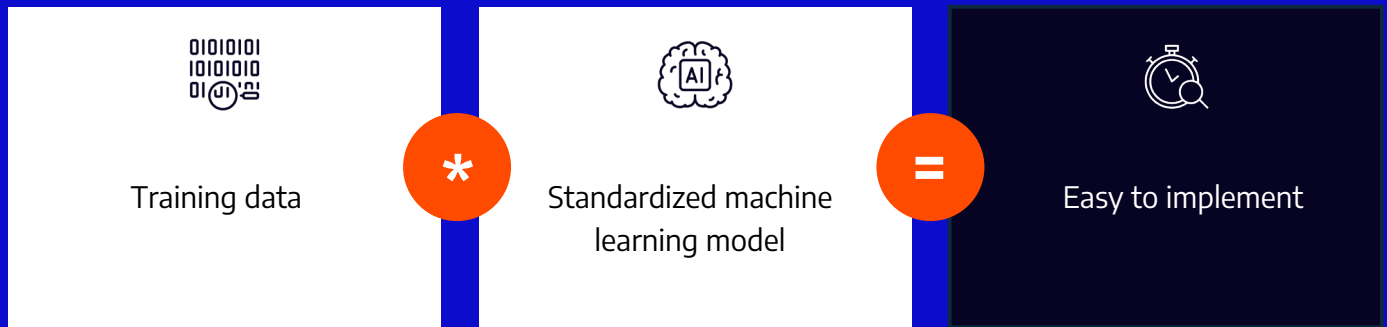
Machine Learning Increases Effectiveness

Existing fuzzy matching methods of comparing names are generally only good at detecting certain patterns. For example, phonetic comparisons, which examine the similarity of the sound of names, can be good at identifying different spellings of a name but have a problem with simple typing errors. Meanwhile, other methods are good at detecting typos but fail to recognize sound patterns.



This is why ACTICO has developed a new payment screening system that combines a wide range of similarity algorithms. It uses existing machine learning methods to achieve maximum effectiveness and efficiency – more accurate hits combined with fewer false hits.

The screening system should be intelligent enough to flag only risky payments and keep false hits to a minimum in order to avoid unnecessary clarification costs.



The right training data is half The battle

A machine learning model is only as good as the data it uses. This is why creating the right training data required the experienced input of VP Bank Group and other partners. This made it possible to train a standardized machine learning model. VP Bank Group commissioned an external consulting firm to carry out a benchmarking exercise. This confirmed the above-average efficiency of the model. The work of creating the model was not too onerous because the different parties worked together to contribute their expert input.

Significant reduction in false hits Before going

From December 2020 to January 2021, the project team (comprising members of the Compliance, Payments and IT departments) worked hard to calibrate and test Actico's new payment screening system. The efficiency of the tool with the new test logic was put through its paces by running it against several thousand payments a day. Targeted, dynamic evaluations made it possible to determine which test elements generated the most hits. Targeted whitelisting, such as mapping exceptions against certain aliases, made it possible to eliminate numerous unnecessary alerts.

Daily hits already lower when System went live

Despite the fuzzy matching, this careful calibration of the system meant the volume of daily hits was already slightly lower than its predecessor by the time it went live on 1 February 2021.



Number of hits fell further in day-to-day operations

From February to June 2021, the volume of hits declined steadily while their quality continued to improve. In tandem, the proportion of transactions forwarded to the compliance team for closer inspection increased by more than 15% compared to the total volume of transactions checked. This indicates that the system has improved the quality of the transactions it checks.



Fuzzy Matching Of Payment Transactions At VP Bank Group

Legend



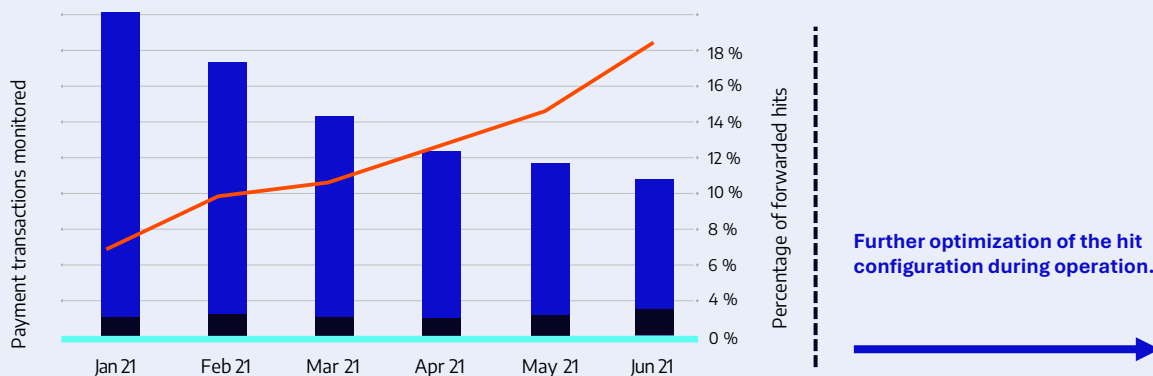
Hits generated by the system



Hits forwarded to compliance team



Percentage of forwarded hits



Optimizing the system with ACTICO Machine Learning and targeted whitelisting is steadily reducing the number of fuzzy matches. The quality of hits is improving and the payments team has to clarify fewer and fewer unnecessary hits. During ongoing operations, the payments team continues to optimize the hit configuration.



For us, it was important that fuzzy matching would increase the quality of hits for incoming and outgoing payments without unnecessarily increasing the number of transactions that had to be checked. We have achieved this goal without overburdening our payments and compliance teams.”

Fabian Wälte

**Head of Payments and Transaction Services
VP Bank Group**

Conclusion

More and more banks are making the switch and using fuzzy matching instead of exact searches to screen payment transactions. Their aim is to improve the quality of hits and focus on those that are truly risky. The challenge lies in striking the right balance between effectiveness and efficiency. This means finding as many risky transactions as possible and avoiding false hits by expertly calibrating the system. ACTICO Machine Learning facilitates a payment screening system that relieves the pressure on payments and compliance staff in the long run by improving the quality of hits.

VP Bank Group

VP Bank Group is an internationally active private bank and one of the largest banks in Liechtenstein. It has offices in Vaduz, Zurich, Luxembourg, Singapore, Hong Kong and Tortola in the British Virgin Islands. VP Bank is listed on the SIX Swiss Exchange. The group's financial strength is confirmed by its A rating from Standard & Poor's. The majority of share capital is in the hands of three cornerstone investors: the Stiftung Fürstl. Kommerzienrat Guido Feger, the U.M.M. Hilti-Stiftung and the Marxer Stiftung für Bank- und Unternehmenswerte – three foundations that guarantee its continuity, independence and stability.

"Thanks to our specialist knowledge and excellent networks, we develop bespoke financial solutions for intermediaries and private clients as well as structured investment solutions through our fund management companies. We achieve this by building on our long experience and expertise in servicing discerning clients."



ACTICO empowers companies worldwide to significantly increase their efficiency – always in line with regulatory requirements.

With ACTICO Advanced Decision Automation Technology, powering scalable, AI-supported software and SaaS solutions for Regulatory Compliance and Credit Risk Management, the company creates significant added value for its customers – primarily financial service providers.

With the experience and expertise of over 25 years of successful business activities, ACTICO shapes long-lasting global customer relationships and partnerships with renowned financial, industrial and technology companies around the world. The company combines high-performance, cutting-edge technology with exceptional customer focus and operational agility.

ACTICO GmbH is part of the ACTICO Group, which brings together specialised providers of digital solutions for the financial services sector under one roof. With four companies in six locations and 230+ employees, the Group serves over 300 of the world's leading financial companies.

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