Munich RE

Case Study
Cost savings from redesigning fraud detection solution
Claims Fraud Analytics

Initial situation

– Client had implemented a vendor developed fraud detection solution
– Predictive model lacked clarity and rule engine using ~20 equally scored and weighted rules
– Low transparency, limited flexibility and no development insights
– Low investigation rate of 7% and fraud detection hit ratio of 10%
– Resultant high fraud leakage and increased claims costs

Project approach

– Enhanced existing engine with additional rules from clients' data patterns, supplemented by rules derived from Munich Re's expertise (27 client rules and 46 Munich Re rules)
– Introduced weighting factors to rule set
– Trained and validated multiple Machine Learning techniques; implementing the most robust, high performing model
– Outcome is a decision mechanism based on weighted scores, enhanced rules and advanced machine learning model

Results

– 2 x enhanced positive fraud detection rate, whilst maintain the 7% investigation rate
– > 5 x direct cost savings, due to precision in potential fraud case identification
– Significant positive impact on resource utilization and operational efficiency
– Provided a scalable, transparent solution, ensuring sustainability and adaptability to future challenges
– Continual refinement of fraud detection techniques as part of long-term partnership

Our experts to contact:

Dean Prendergast
Senior Engagement Manager
dprendergast@munichre.com
Tel.: +49 89 38 91-36 03

Krishna Dalal
Data Scientist
kdalal@munichre.com
Tel.: +91 22 40 32 06 21

Dr Weihao Choo
Head of Consulting Asia-Pacific
wchoo@munichre.com
Tel.: +65 63 18 04 29

Munich Re
Cost savings from redesigning
fraud detection solution