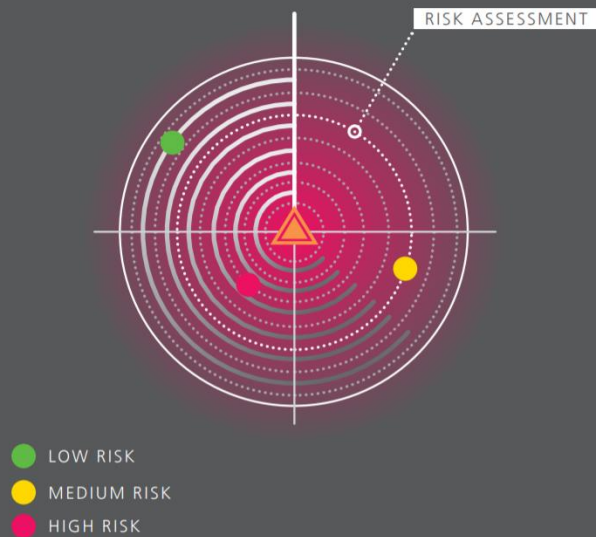


AI Module Pilot with a Swiss health insurer

Using AI for assessing risk levels

ARTIFICIAL INTELLIGENCE



- machine learning can be applied to analyse historic data on investigated claims in combination with the data from reliable outside sources
- these learnings can then be applied to assess fraud risk levels of claims

Goals:

1. improve prioritization and streamlining of resources
2. detect high risk claims

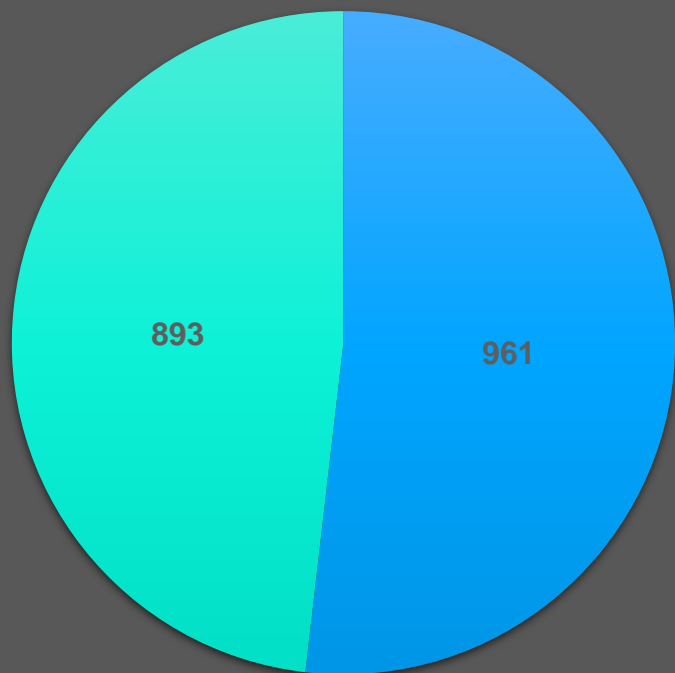
Step 1 – preparing the anonymized learning data set

insurer's data

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
1	(value)	(value)	(0=NO; 1=YES)	(R/Y/G)	(value)	(R/Y/G)	(ENUM value)	(R/Y/G)	(ENUM value)	(R/Y/G)	(number of changes in the preceding 3 yrs)	(value)	(value)	(value)	(value)	(value)	
2	Key	Claim Investigated	Fraud Confirmed	confidential – selected attributes for each claimant													
3	confidential	1	1	G	502	G	identity	G	ADULT	G	3	2	More than 3 apartments	0	0	1	
4		1	1	G	463	G	identity	G	ADULT	G	0	2	More than 3 apartments	0	0	2	
5		1	1	Y	390	Y	identity	G	ADULT	G	0	2	More than 3 apartments	0	0	3	
6		0	0	R	350	R	identityWithConflictingStreet	G	ADULT	G	3	1	2-3 apartments	0	0	4	
7		0	0	G	495	G	identity	G	ADULT	G	3	1	More than 3 apartments	0	0	5	
8		1	1	G	519	G	identity	G	ADULT	G	1	1	2-3 apartments	0	1	6	
9		0	0	G	487	G	identity	G	ADULT	G	0	4	More than 3 apartments	0	0	7	
10		1	1	G	486	G	identity	G	ADULT	G	1	2	More than 3 apartments	0	0	8	
11		1	1	G	474	G	identity	G	ADULT	G	3	1	More than 3 apartments	0	0	9	
12		1	1	#NA	#NA	#NA	#NA	#NA	#NA	#NA	#NA	#NA	#NA	#NA	#NA	#NA	10
13		1	1	Y	389	Y	identity	G	ADULT	G	1	3	More than 3 apartments	0	0	11	
14		000001470	0	0	Y	#NA	#NA	identity	Y	#NA	#NA	#NA	#NA	#NA	#NA	#NA	10

credit rating agency data

Step 2 – training the module using the learning set data with the precision rate of 52%

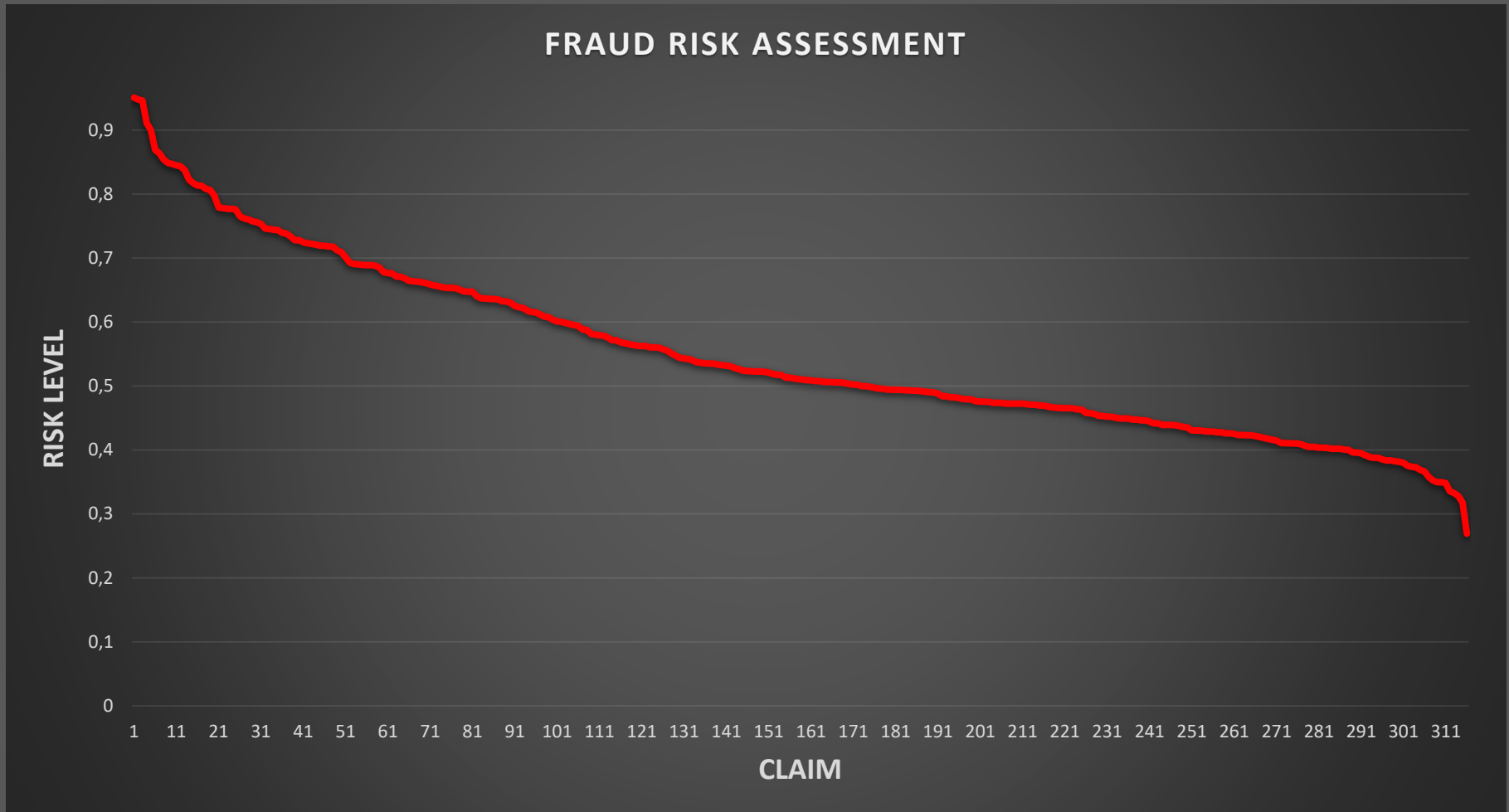


■ fraudulent ■ non-fraudulent

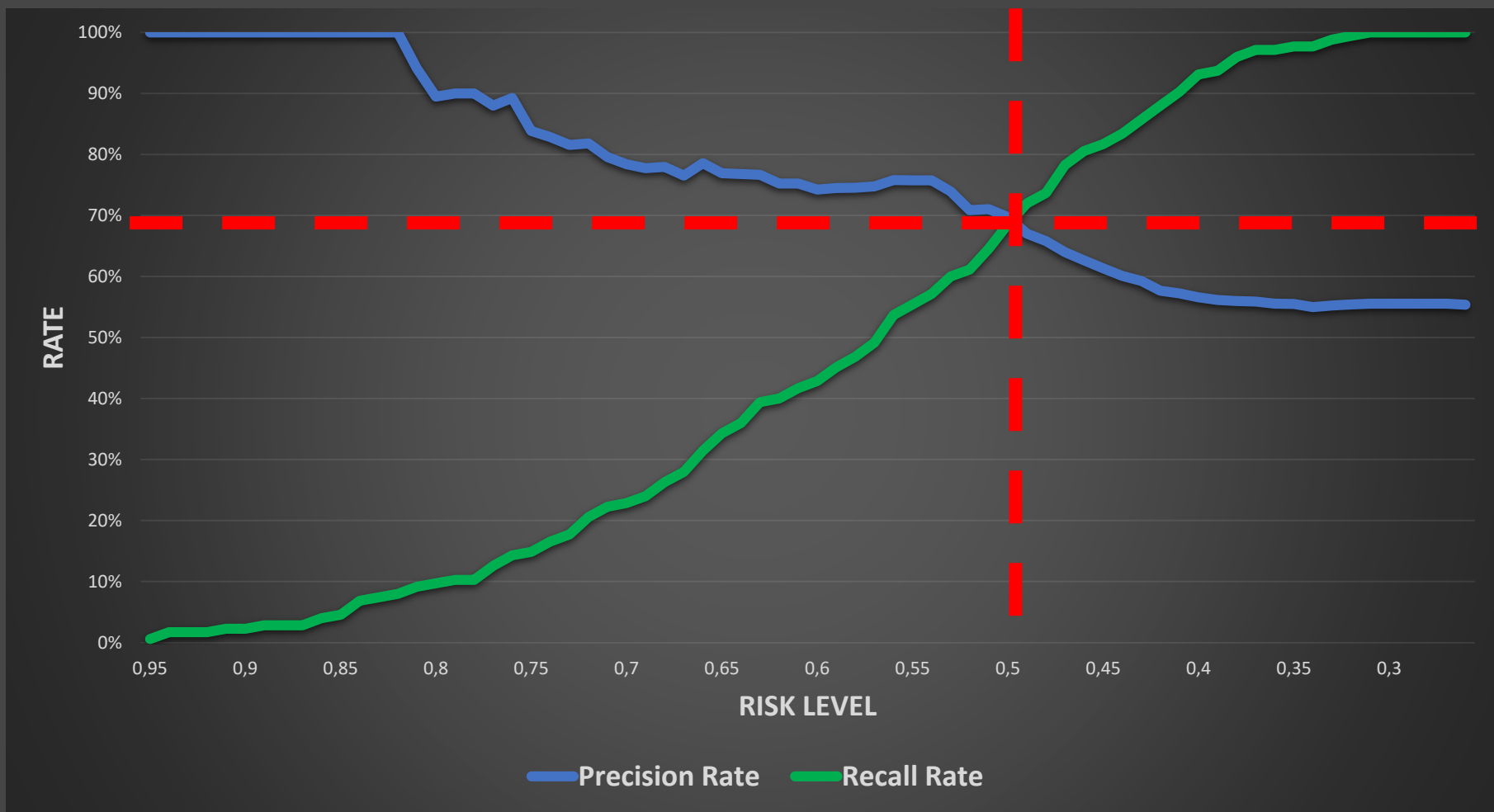
the model identified and weighed statistically relevant attributes:

Score	0.0005200	0.0000734	7.403	7.00	11
X..All.Related.Companies	confidential				
HitTypeidentity	confidential				
HitTypeidentity	1.0016077	0.1600000	0.611	0.00000	

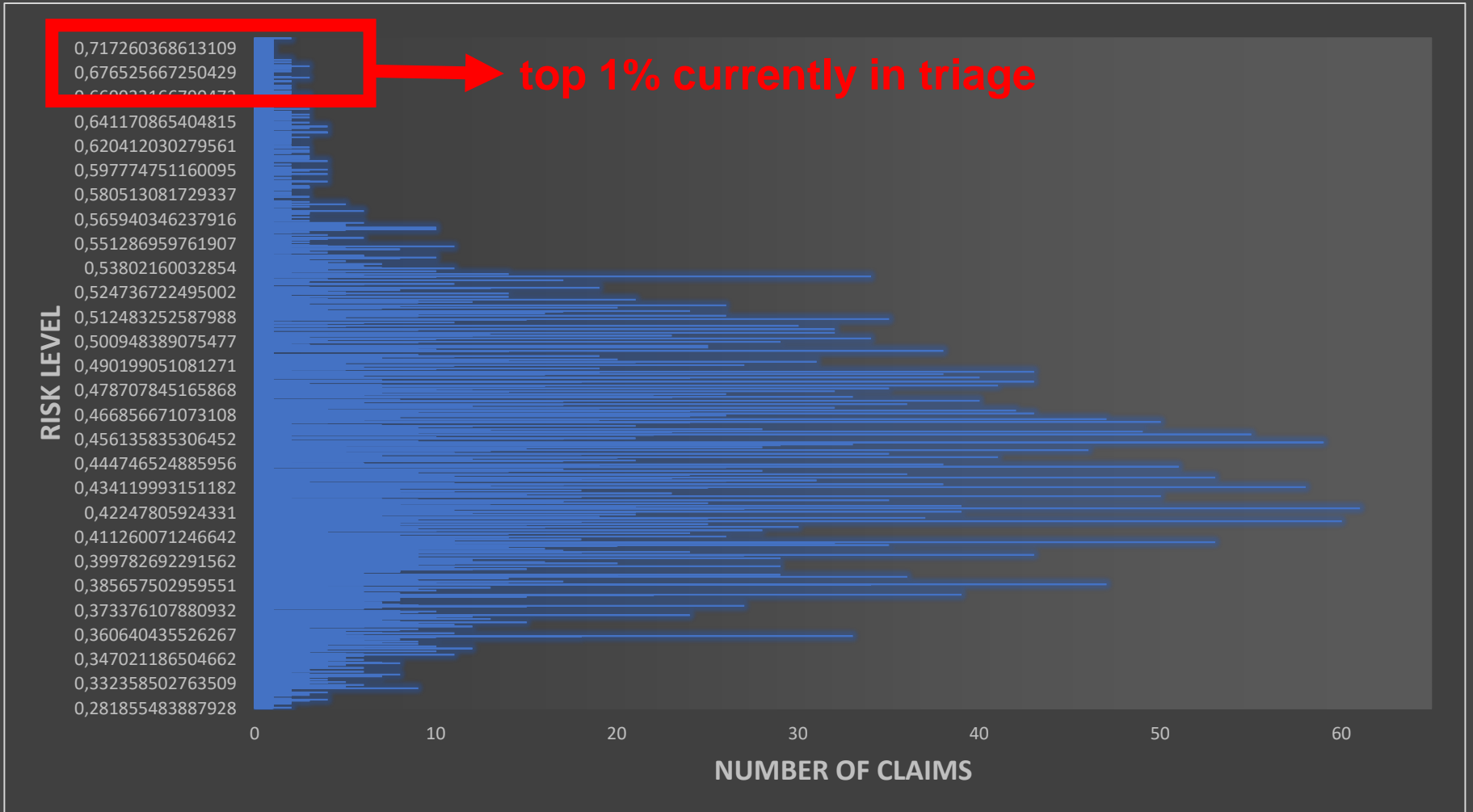
Step 3 – testing the module on 311 claims in investigation



Goal 1 achieved! The precision rate increased for 20 percentage points!



Step 4 – assessing regular open claims, currently in progress



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