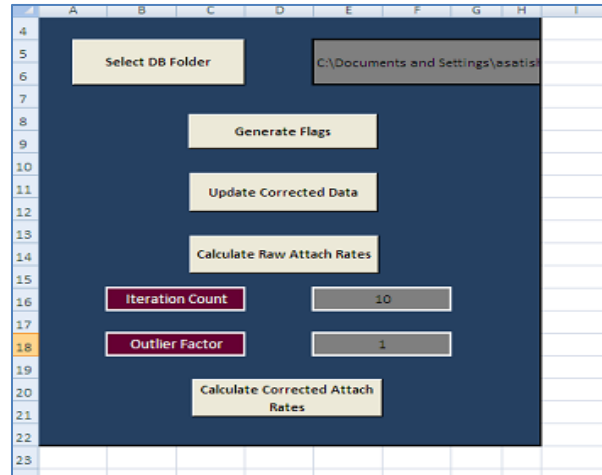


Fraud Detection solution for a law and accounting firm in Brazil

Business Case

A reputed auditing and accounting firm in Brazil wanted to find anomalies in the production data that it used to receive from its clients. The anomalies were because of inflated raw material consumption figures in their production orders. The objective of the project was to evaluate the data and flag off all the production orders where the consumption rates were inflated.



Solution

Our solution included algorithms to sort, clean and manipulate the production order data. Special algorithms were written to take care of missing data. After data cleansing and validation, the probable attach rates were calculated from a set of identical production orders and the anomalies were flagged off. Excel is used as the front end for the solution and VBA is used to process and analyze data to derive the required results and reports.

Since the data volume was huge, special care was taken to optimize the code to minimize processing time.

	A	B	C	D	E	F	G	H	I	J	K
1											
2	Loss Margin (%)	5		Run							
3											
4	Output_Product	50,792		Resources							
5											
6											
7		30792A	MER025-LSE	MER258-FSPM	MER272-TSYE	MER278-CKZ7	MER295-STHL	MER322-CASC	MER002-FSEP	MW104-ADTM	MW012-ADBS
8	Mean_Attach_Rate	2.7027	0.0019	0.0048	12.2700	1.0116	0.7589	0.0536	0.0138	0.0015	0.0017
9	Lower_Limit	2.5676	0.0018	0.0043	11.6622	0.9610	0.7209	0.0509	0.0131	0.0015	0.0016
10	Upper_Limit	2.8379	0.0020	0.0048	12.8898	1.0622	0.7968	0.0562	0.0145	0.0016	0.0018
11											
12											
13	Output_Product	50,792		Resources							
14											
15											
16		30792A	MER025-LSE	MER258-FSPM	MER272-TSYE	MER278-CKZ7	MER295-STHL	MER322-CASC	MER002-FSEP	MW104-ADTM	MW012-ADBS
17	22739	3.5961	1.0040	12.0000	12.2109	0.0008	0.0162				
18	22738	1.4894	0.0019	0.0041	1.3998	1.0013	1.5016	0.0533	0.0133	0.0016	0.0017
19	22737	12.1716	0.0019	0.0026	12.3410	1.0219	12.1113	0.0538	0.0143	0.0015	0.0017