

Maschine Learning Solutions for the CFO Office - Sales/Margin Prediction -

10.01.2020

Sales prediction with Machine Learning: 4-Day PoC



- Summary	_ Duration	Cost
4 Days "Proof of Concept (PoC)" approach for assess, define and implement an automated	4d	free
sales revenue prediction based on your datasources.	Target Group	
Details Verovis is a consulting company and Microsoft Partner, specialized on Advanced Analytics for	 CFO / Business D All Branches 	Decision Maker (BDM)
the Controlling/Accounting function. With this offering we enable clients to make future cash management projections based on historical liquidity data. For this we use data from the customer's SAP system and feeds it into self-developed models. The accuracy is to be expected > 90% for first iteration and we will assist in fine-tuning for even better results and continuous model improvements	 Top 3 Benefits & 1. Showcase poter revenue/margin 2. Identification of 3. Roadmap for magin 	Results ntial of automated prediction potential drivers aschine-learning
 - Day 1 – Scoping Workshop incl. Prerequisites-Check - Day 2 – Data Load and Machine Learning - Day 3 – Customizing of Report Templates - Day 4 – Presentation of Results and recommended actions/roadmap for going-live 	 Topics Financial Intellige Enterprise Perfor 	ence mance Management
The Approach: Image: Specific term Image: Specific term <	 Automated Pred Maschine Learnin Microsoft Azure Microsoft Power SAP ECC/HANA/ 	ictions based on ng Data Services BI BW

Summary

– Details

Objective and Approach

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Predictive Planning uses a variety of data and algorithms





Two-Step Revenue Prediction





Our demonstration of revenue prediction in the automotive industry uses public data:

- New registrations in Germany
- New registrations of the target company in Germany
- Consumer price index for traffic
- employment rate
- commodity prices
- exchange rates
- And more...

Step 1:

For forecast years, the available data is extrapolated. A hybrid of the Error Trend Seasonality (ETS) and the Auto-Regressive Integrated Moving Average (ARIMA) achieve the best results.

Optimal Forecast

Identification of core driver

Step 2:

The extended data record is divided into training and test data record. Subsequently, the "Multiple Regression" algorithm independently determines the **most** appropriate weighting of the predictors.

Results	Linear update Previous year	Hybrid Model
R ²	88%	97%
Middle absolute error (in Mio. EUR)	1.812,67	981,40
Middle relative error (in %)	5,73%,	3,10%
	+	·
Unemployment rate Employed		2.092 5
VIP for traffic		354
EUR-USD		-8.820
Intercept		-219.549
•		

Integration of dynamic environmental factors for the planning process Verovis



Optimal Forecast

The forecast based on the machine learning algorithms is on average basis significantly closer to the actually generated sales than an update of the previous year's value. Including important internal as well as external factors, the Predictive Planning approach is able to react much more automatically and earlier to changes in environmental conditions. In addition, untapped sales potential can be identified.





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What's in for you? Strategie- & Entscheidungssicherheit | Better Practise–orientierte Business Advisory | Erfolgreiche Transformation & Programmsteuerung | Erhöhung Prozesseffizienz & Governance | Effektive Systemeinführung SAP S/4HANA, SAP BPC & Tagetik | Höhere Analysetiefe, Datenqualität & erfolgreicher Change | verovis GmbH

Machine Learning Use Cases for the Office of the CFO!

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Cash Prediction

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Benefits: Automated cash-in prediction and cash value driver analytics. **Data Sources:** Accounts receivables and sales on document level as well as plan data on aggregated level.

Group Reporting Anomaly Detection



Benefits: Rapid detection of false values as well as controlling console for data quality, including commentary information. **Data Sources:** Group reporting on group account level.

Revenue Prediction



Benefits: Automated revenue prediction for plan data validation.

Data Sources: Sales information on document level as well as external indices and internal plan data accuracy.

Purchase-to-Pay Anomaly Detection



Benefits: Spend volume accuracy and automated category assignment. **Data Sources:** Accounts payables as well as general accounting and procurement information on document level.



Benefits: Automated EBIT prediction for plan data validation.

Data Sources: Group/entity reporting on group/entity account level as well as notes information.



Benefits: VAT monitoring and fast identification of tax reduction opportunities. **Data Sources:** Accounts receivables, accounts payables and general accounting information on document data.