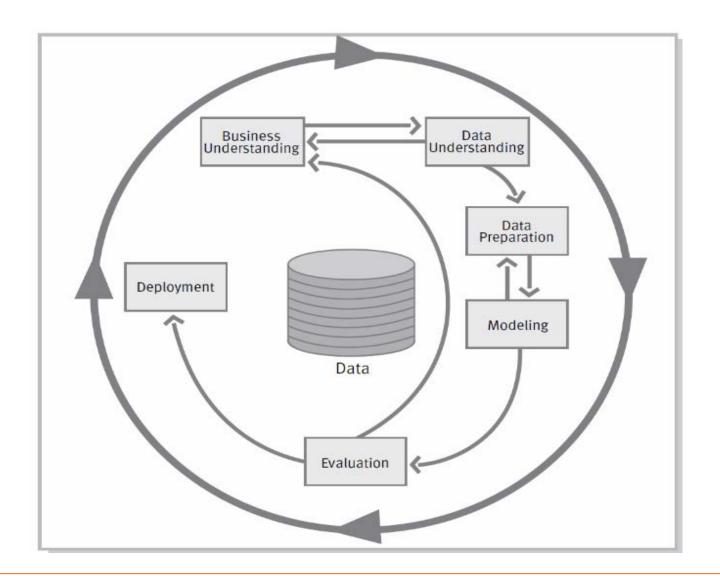


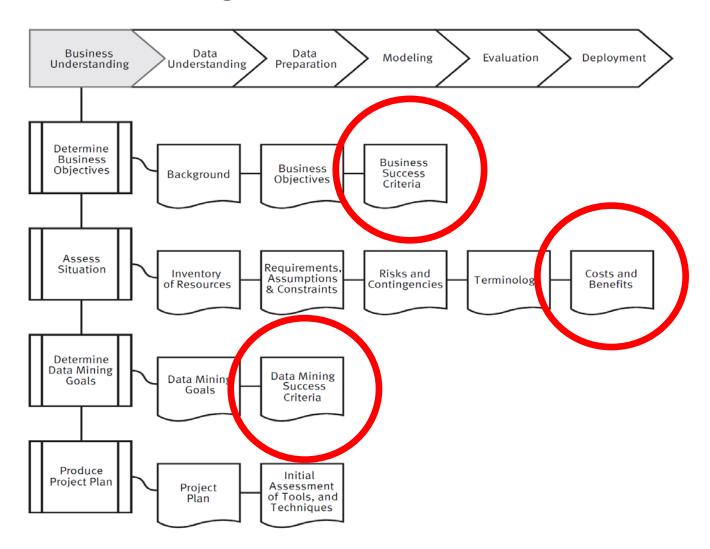
Revisiting CRISP-DM





Revisiting CRISP-DM

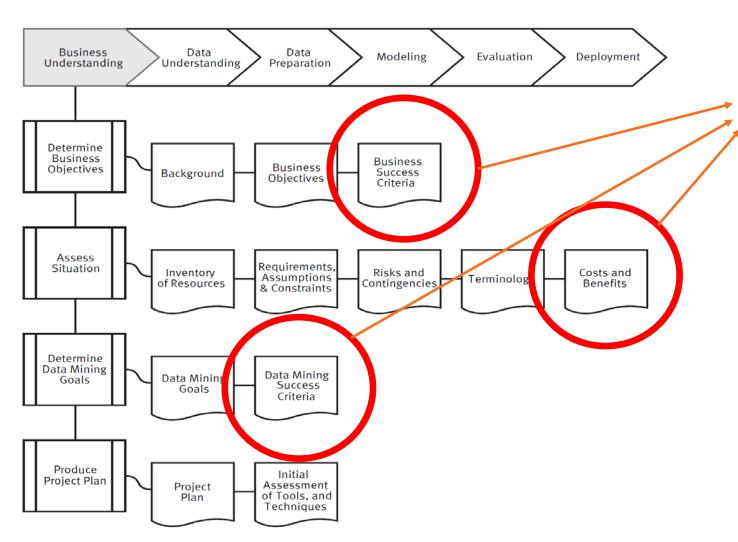
1 Business understanding





Revisiting CRISP-DM

1 Business understanding



Cost-benefit analysis is essential for aligning initiatives with business objectives, gaining situational awareness, and driving data mining success criteria.

But how to do it?



Model Cost-benefit Analysis Framework

Cluster Analysis, Social Regression Analysis Classification Model **Example Model** Network Analysis, etc. Descriptive Analytics Models Predictive Analytics Models **Type of Analytics** Model Cost Benefit Calculation Level 1 Analysis **Cost Matrix Cost Regression Level 2 Analysis** Classification Value of Insights Derived for Decision-making **Instance Level Instance Level** Level 3 Analysis Regression Classification



Model Cost-benefit Analysis Framework

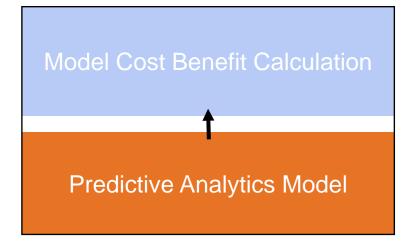
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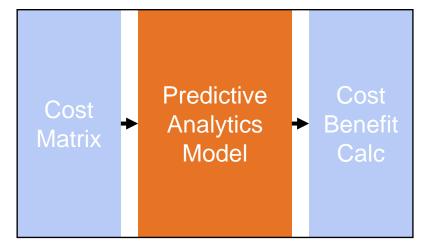
Model Cost Benefit Analysis Framework – Predictive Analytics

Three potential levels of analysis, depending on the problem context

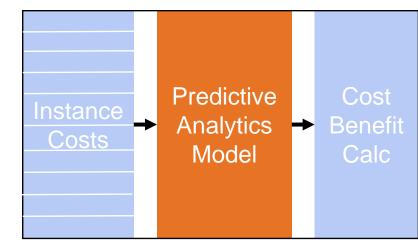
Lv 1 – Model Level



Lv 2 – Matrix Level



Lv 3 – Instance Level

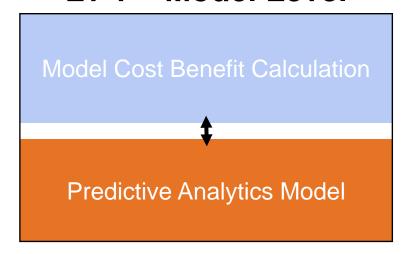




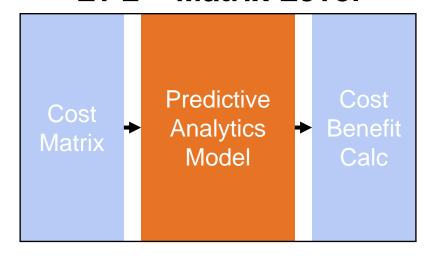
Model Cost Benefit Analysis Framework – Predictive Analytics

Three potential levels of analysis, depending on the problem context

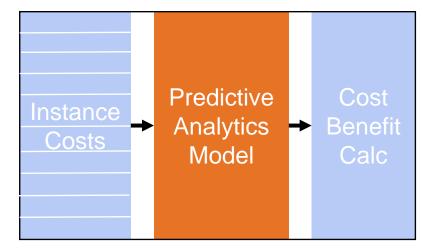
Lv 1 – Model Level



Lv 2 – Matrix Level



Lv 3 – Instance Level



Treat model like a black box
Couple TP/TN/FP/FN with costbenefit calculations

Input cost matrix ratios into model
Couple TP/TN/FP/FN with costbenefit calculations

Input instance-level costs into model

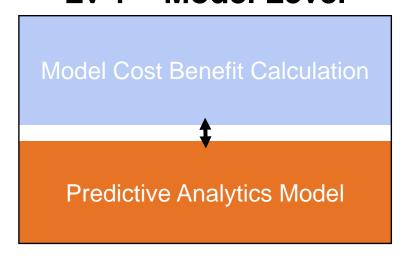
Couple TP/TN/FP/FN with costbenefit calculations



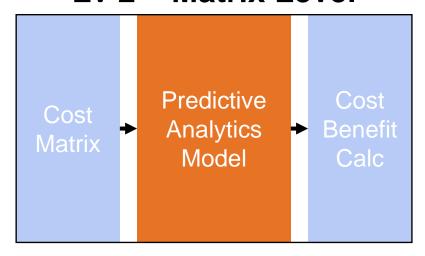
Model Cost Benefit Analysis Framework – Predictive Analytics

Three potential levels of analysis, depending on the problem context

Lv 1 – Model Level



Lv 2 – Matrix Level



Lv 3 – Instance Level

