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Applying data mining in telecommunications

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Stellingen

1. It is more important to first correctly define the problem to be solved rather than to source the best attributes or select the best algorithms (this thesis, chapters 2 and 3).
2. Algorithms with higher computational cost do not necessarily add sufficient value to solving a business problem (this thesis, chapter 3).
3. As an alternative to using the actual predictions, predictive models can also be leveraged to just explain the underlying mechanisms (this thesis, chapter 4).
4. Predictive models can form the basis of a framework to simulate network load or service revenues under different scenarios, as an alternative method for exploiting and deploying data mining results (this thesis, chapters 5 and 6).
5. The recipe for gaining acceptance for data mining in an organization is to begin with simple methods, using tools known to end users and prove performance in terms of business results, thus gaining trust and overcoming the perception of data mining as a black box activity (this thesis).
6. The deployment step in the CRISP-DM process model is not sufficiently addressed in scientific data mining research literature.
7. It is academia's responsibility not only to discover new algorithms, but also to tell business and governments how to use these advances.
8. Cutting edge machine learning research should not only be the privilege of digital technology giants such as Google and Facebook.
9. Data mining does not have to be expensive: A data mining solution can be implemented using standard hardware, open source software and the available data.
10. Data mining technology, just like other disruptive technologies, is neither intrinsically good nor bad by default: It is the use or abuse of the technology that is beneficial or a menace for society.