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Bachelorarbeit / Masterarbeit

Putting the Pieces Together –
Describing the Machine Learning Value Network

The rise of machine learning (ML) has pervaded today's society in numerous industries and caused great advances in automating and augmenting tasks carried out by humans. Novel analysis techniques and the vast availability of data are fueling the ascend of ML. It allows generating knowledge and functionalities based on available data. Relevant applications are manifold ranging from chatbots in customer services and decision support systems in medical diagnosis to advanced data analytics in internal enterprise processes. ML applications enable human-like or even exceeding results for specific tasks.

Several resources are necessary from the initial idea to the deployment of ML applications. These include but are not limited to computational power, machine learning libraries, and training data. Access to these resources determine the success of applying ML and thus play a relevant role for organizations aiming to use ML. Hence, the goal of this thesis is to analyze the ML value network. Necessary resources, artifacts, and their role within the ML value network shall be identified and put into relation to one another.

The scope varies depending on the type of thesis (i.e. Bachelor's or Master's thesis). A research question extending the sole analysis of resources and their relationships should be developed for a Master's thesis in cooperation with the supervisor (i.e. the role of the resources on the democratization of ML).

Empfohlene Einstiegsliteratur:

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- Allee, V. (2008): „Value network analysis and value conversion of tangible and intangible assets," Journal of Intellectual Capital (9:1), pp. 5-24.
- Domingos, P. (2012): "A few useful things to know about machine learning," Communications of the ACM (55:10), pp. 78–87.
- Wolfewicz, A. (2020): „The value chain of machine learning," Medium, available at: https://medium.com/levity/machine-learning-value-chain-c8d00cbc2236.

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