

# Industrial AI Canvas

Designed by:

Date:

Version:

## Data curation



Which cleaning operations are necessary?

How can the data be annotated?

How can subject matter experts (SMEs) contribute their domain expertise?

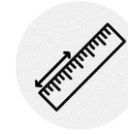
How can quick iteration on data be facilitated in the project?

How can standardized processes for model evaluation/data analysis look like?

Which tools can support data curation efforts?

Which are implications on infrastructure and project setup do the above points have?

## Problem Classes



Which tasks have to be solved by the ML algorithm?

How can the user problem translated into a ML-task?

Which performance does each formulation enable?

How does each problem formulation integrate in the overall system? What are the implications?

Which metrics can be used to evaluate the system's performance?

## User Interaction



Which interaction is the user currently used to?

How does the user interact with the new system?

Which parts are automated, which require user feedback?

How is the interaction performance measured?

Which performance requirements derive from the workflow?

Are there interactions that reduce the performance requirements?

## Operations



Which internal/external regulations apply to the solution?

Which processes have to be run through to productionize a system e.g. software security assessment?

Which stakeholders are necessary to uphold the operation of the system?

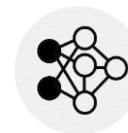
What kind of maintenance is needed for infrastructure and application layer?

How often does the model have to be updated? How much effort is involved?

Which metrics have to be monitored to detect data drift and system performance decline?

What is done in case of the system's performance declining?

## Methods



Which ML methods could be used?

Which ML methods probably fit best on use case characteristics such as structured/unstructured nature of data?

What implications do algorithm choices have on factors such as required data quantity and explainability.

Which are possible training strategies (e.g. synthetic data, pre-training, self-supervision)?

What is the basic solution? Which methods might give better performance?

## Value Propositions



What are tasks the user has to fulfil?

What are the main pain points of the user the solution addresses?

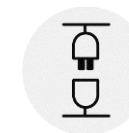
What gains can a user get from the solution?

What is the benefit for the business process?

What key competitive advantage can be generated? If not, can you buy a solution?

How can the business value be measured?

## Integration



How does the solution integrate into the current workflow?

How does it integrate into the application layer?

Can your solution run on existing infrastructure? Are there additional requirements?

## Data Sources



Which data sources are available?

Which data formats are essential?

Are there proprietary data formats?

How is the data stored, and how can it be accessed?

Is there a big difference between acquiring historical data and real-time data?

Is the system batch-processing or real-time?

How does data flow through the system and what is potentially fed back?

Who manages the relevant data sources and are they part of the project?

How can data integrity be ensured?

## Resources



What will the project cost?

Are there preliminary variants that already bring value and cost less than a fully-fledged solution?

What is the infrastructure cost for setup and maintenance?

Are there specific requirements regarding existing infrastructure to build on?

Which roles are available to support system development and operation?

Who are important decision makers regarding budget and technical operations?



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