Plan

2) Frame the problem

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Provide a statement of what is to be learned and how decisions should be made

Initial ML problem definition

1) **Specify the use case and target population (or target process)**

   We are investigating < … >

2) **Provide a question and unit of measurement**

   Because we want to find out < … >

3) **Motivate the question and provide a business objective**

   In order to decide < … >

Example: JOHN DEERE

Image: Freepik.com

1) We are investigating

   <the detection of defects in real time>

   <in our automated manufacturing welding process>

2) Because we want to find out

   <if AI is able to spot defects as they occur>

   <with a precision of at least 95% (detection of defects)>

3) In order to decide

   <if we should replace human experts>

   <which would lead to a cost reduction of 20% (xxx.xxx $) >

Source: Booth et al. (2003)

ML **problem** definition

1) **Specify the task of your model**

   We want the model to < … >

2) **Provide an ideal outcome (independent of the model itself)**

   Our ideal outcome is <...>

3) **Motivate the question and provide a business context**

   In order to <>

Example: JOHN DEERE

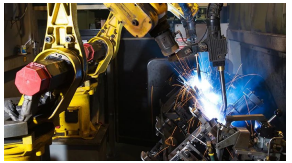

Image: Freepik.com

1) Specify the task of your model
   We want the model to
   < detect bad welds (defective joints) in real time>

2) Provide an ideal outcome (independent of the model itself)
   Our ideal outcome is to
   < be able to replace a bad weld immediately without human expertise >

3) Motivate the question and provide a business context
   In order to
   < replace human experts and reduce manufacturing downtime and costs by 20% >

Source: Google Developers (2020)