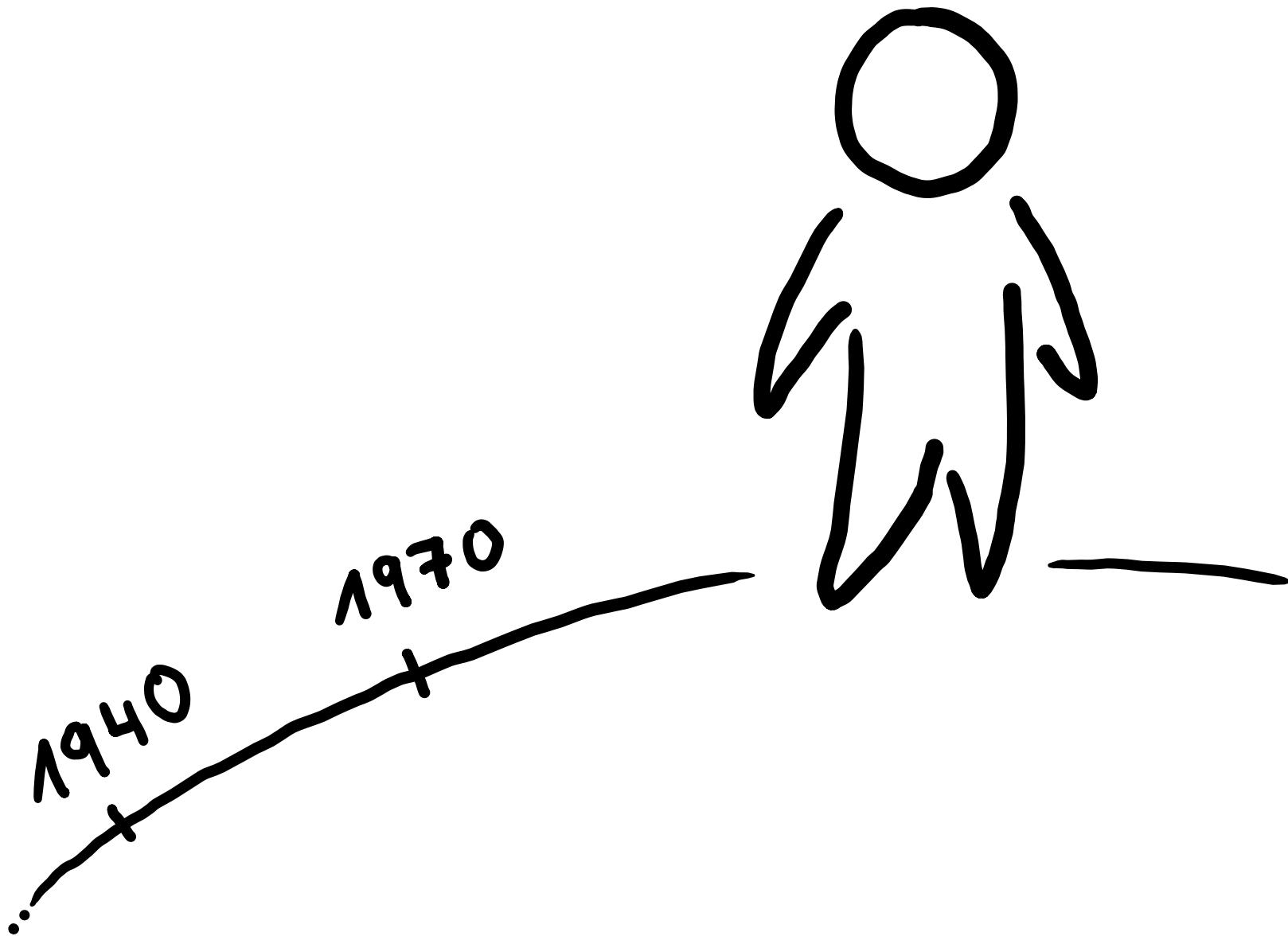
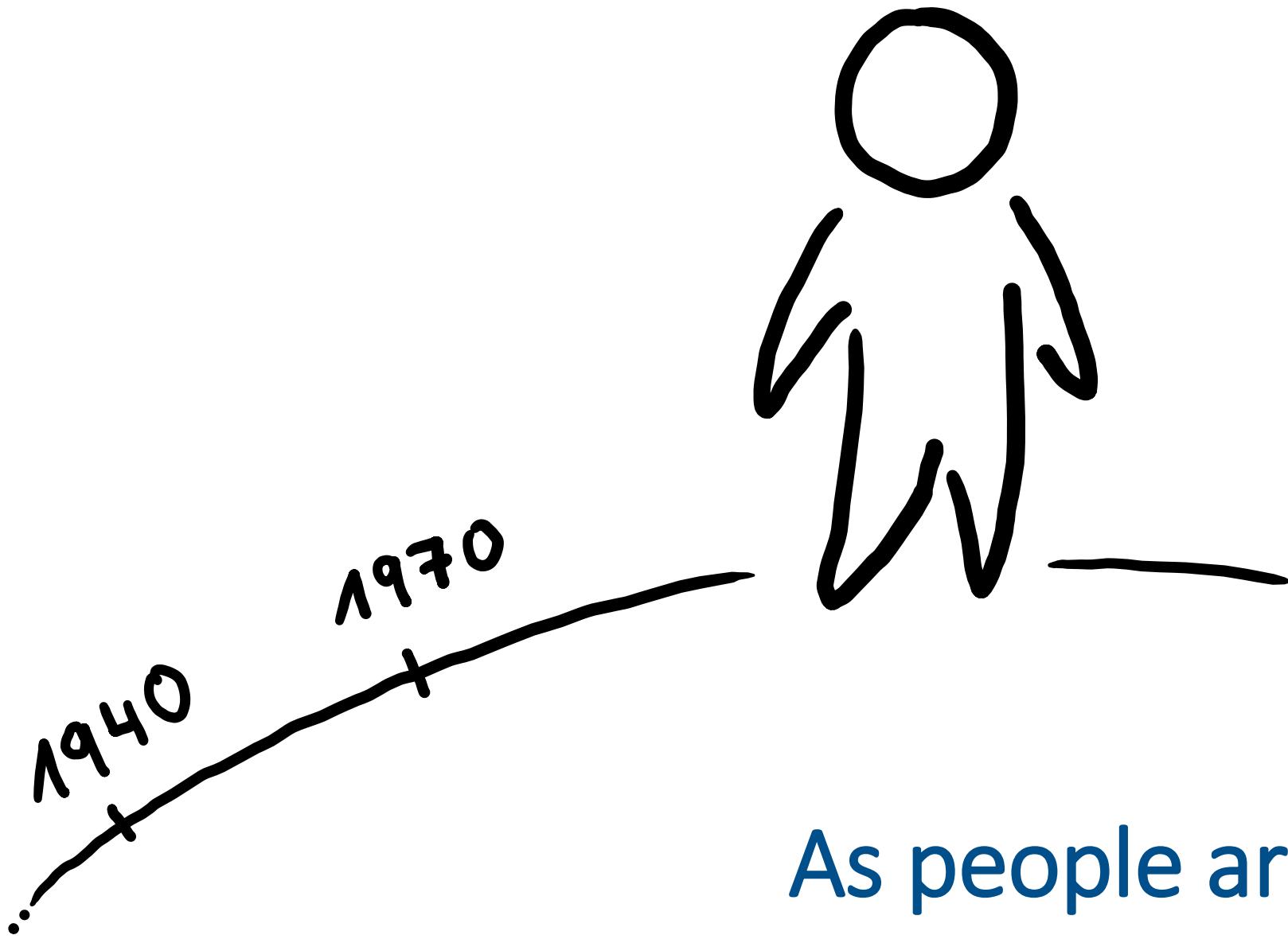




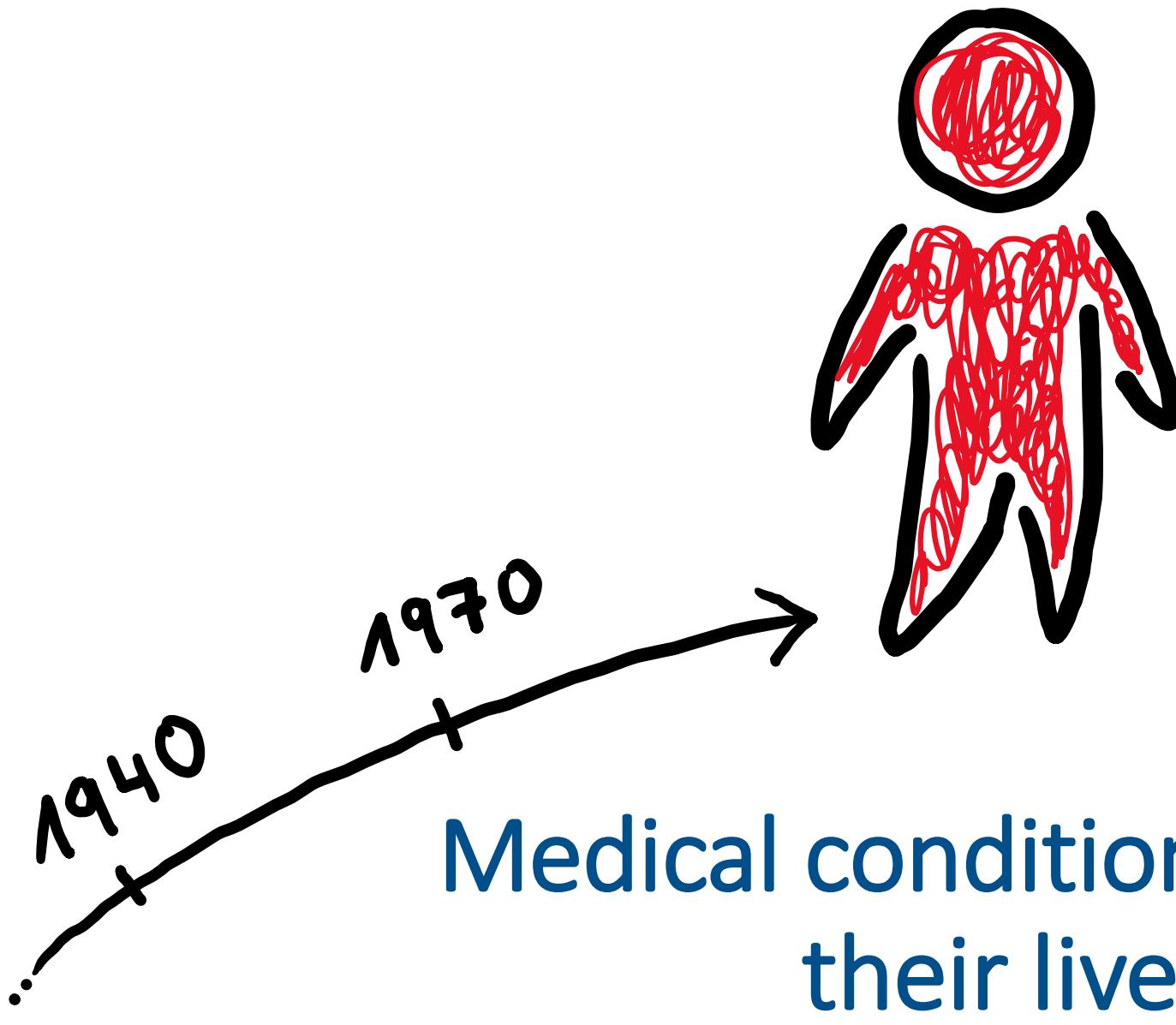
## CZlincial NLP – Proposal

Aortic Stenosis Detection via cNLP  
(clinical Natural Language Processing)



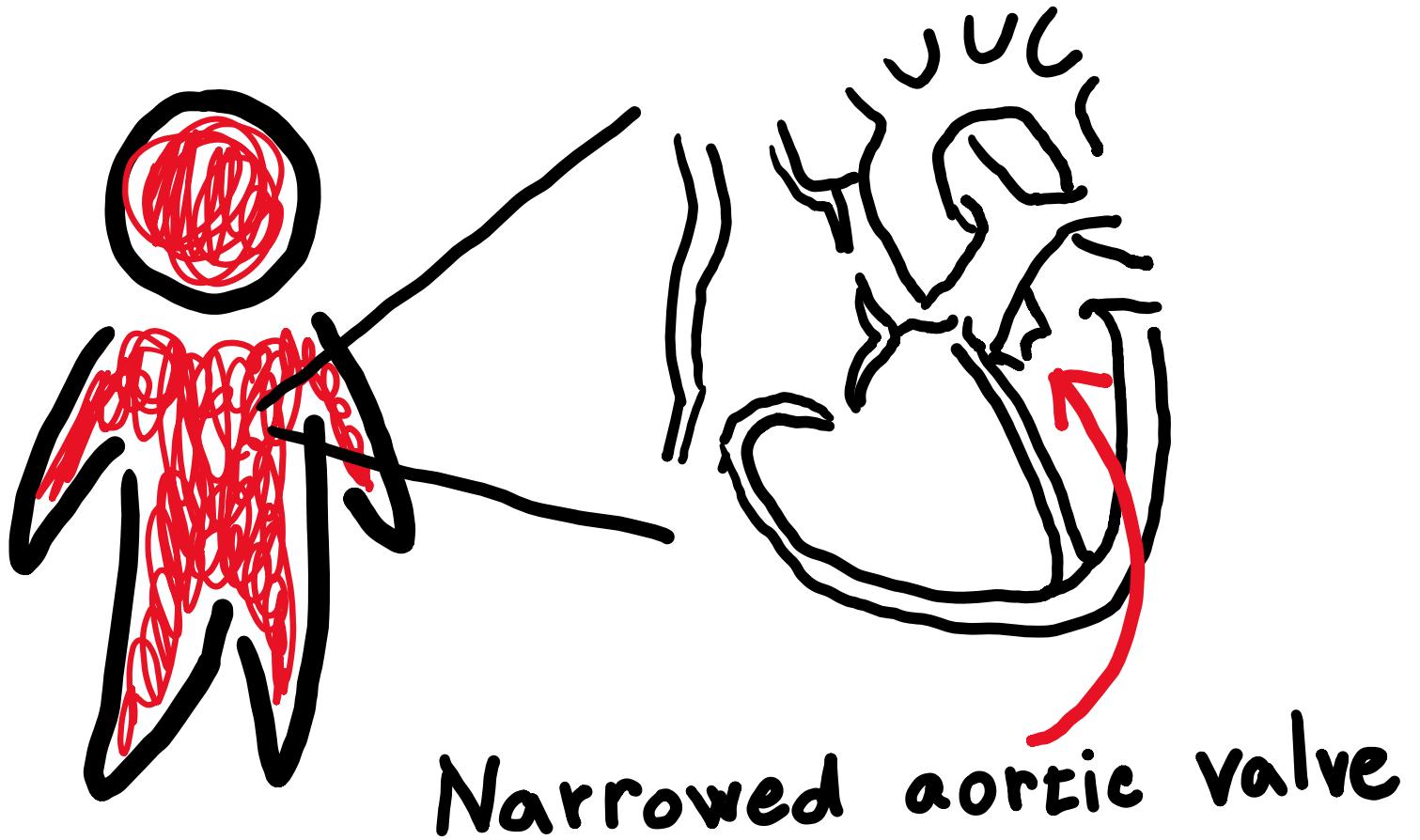


As people are getting older

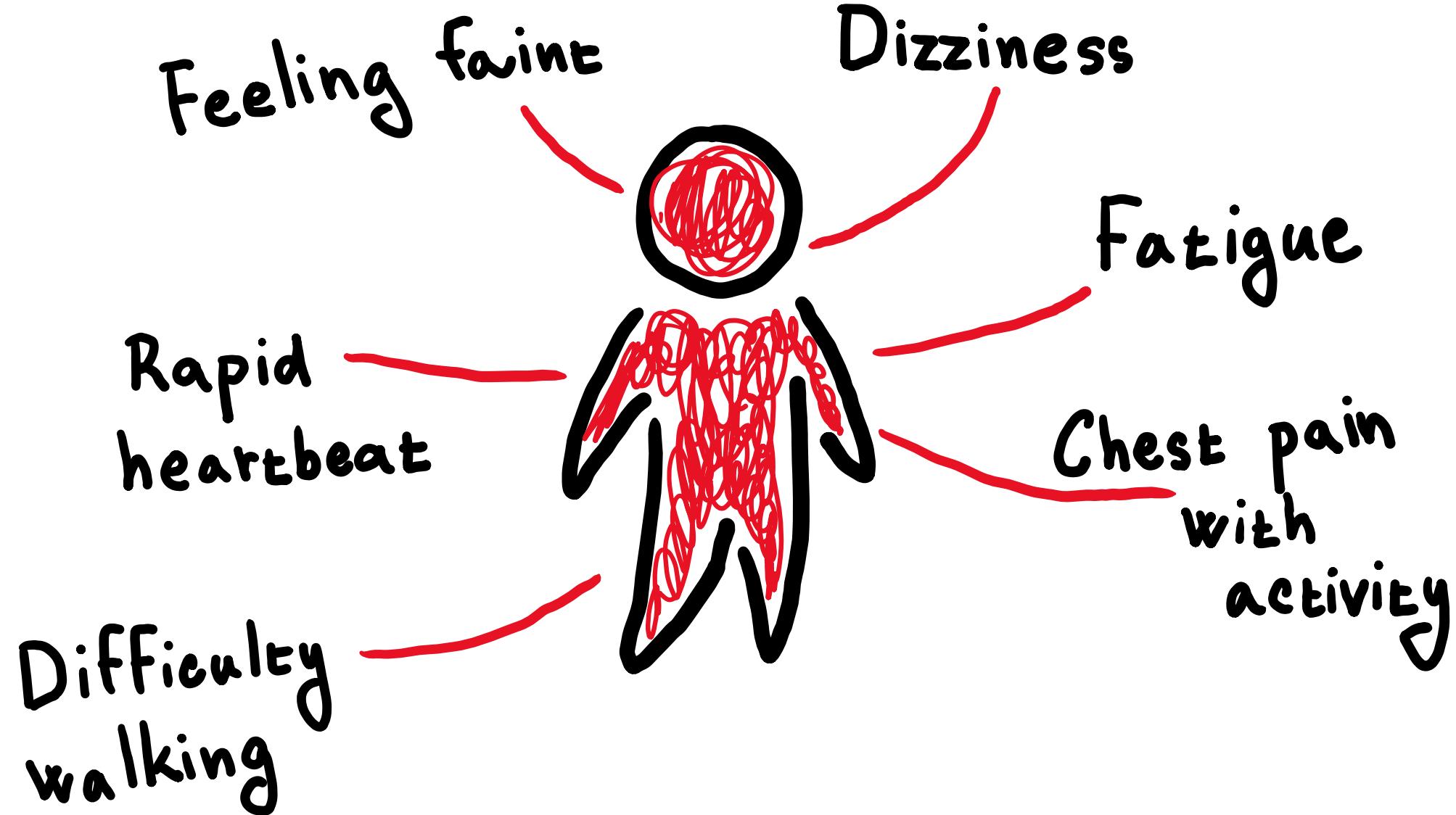


Medical conditions negatively affecting  
their lives can emerge

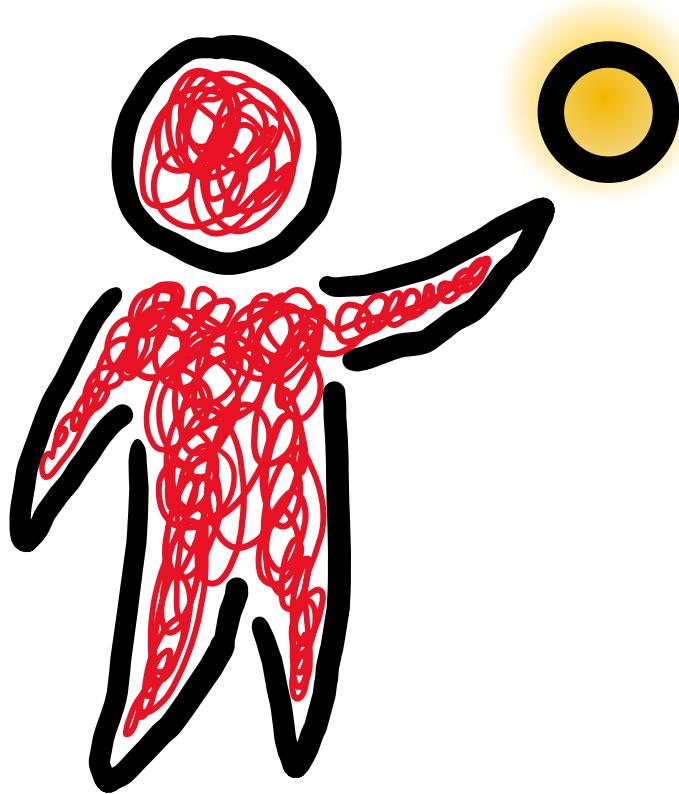
Heart  
not working  
properly



Aortic stenosis being one of them



Accompanied by symptoms affecting life quality



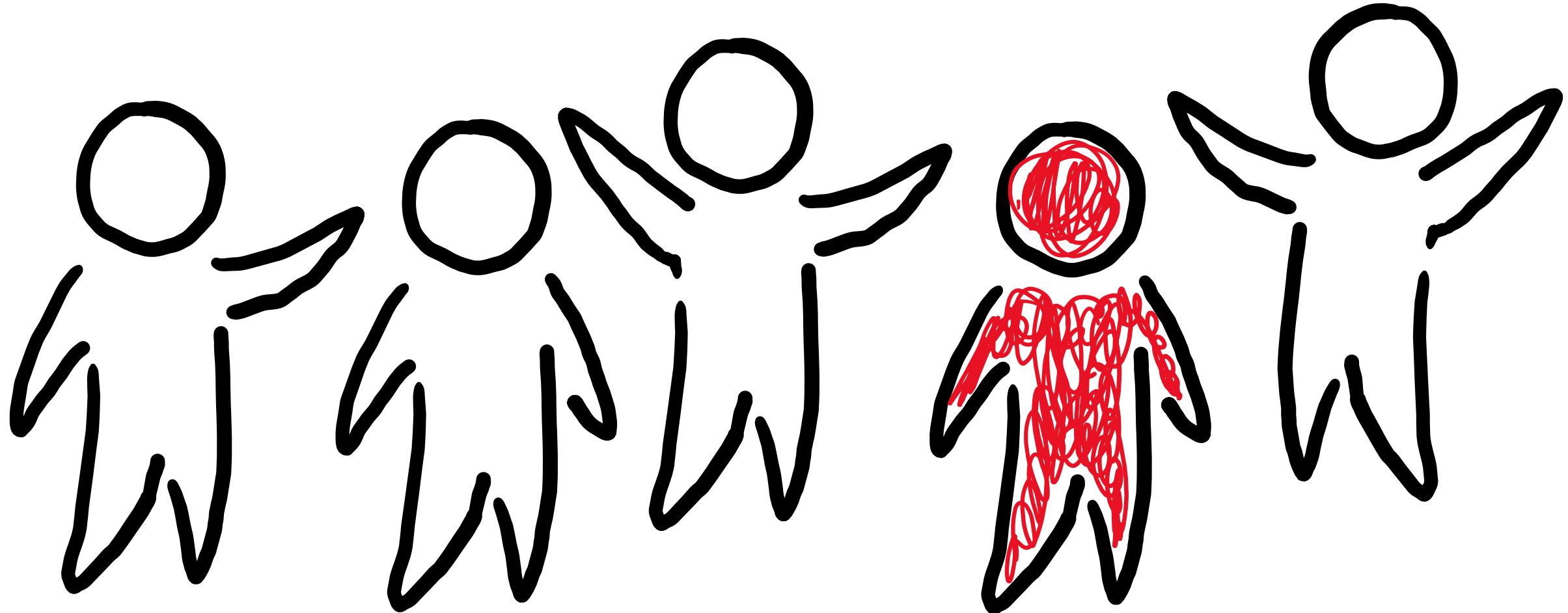
Fortunately, there are options to effectively  
treat aortic stenosis today



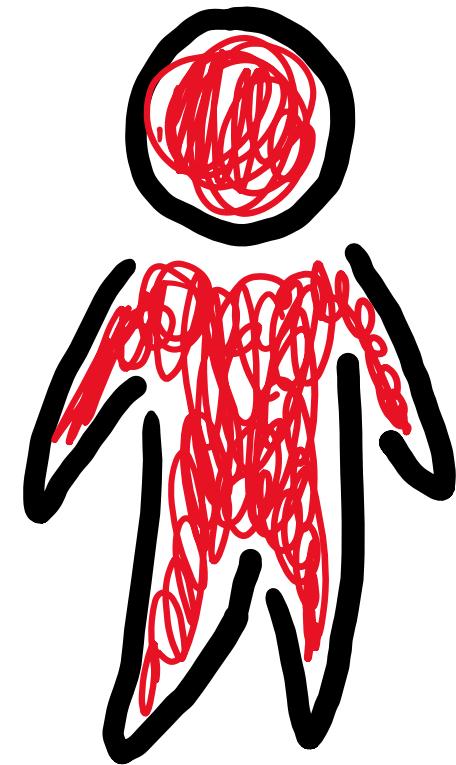
Fortunately, there are options to effectively  
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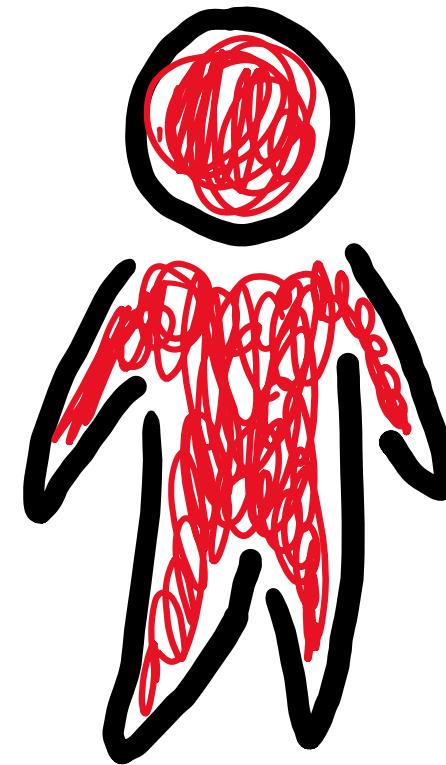
But to cure it, we need to spot it



But to cure it, we need to spot it



As soon as possible



It would be great to use the data  
we already have!



Lots of patient data already exist in  
the form of written text



But it's not easy to get something out of it



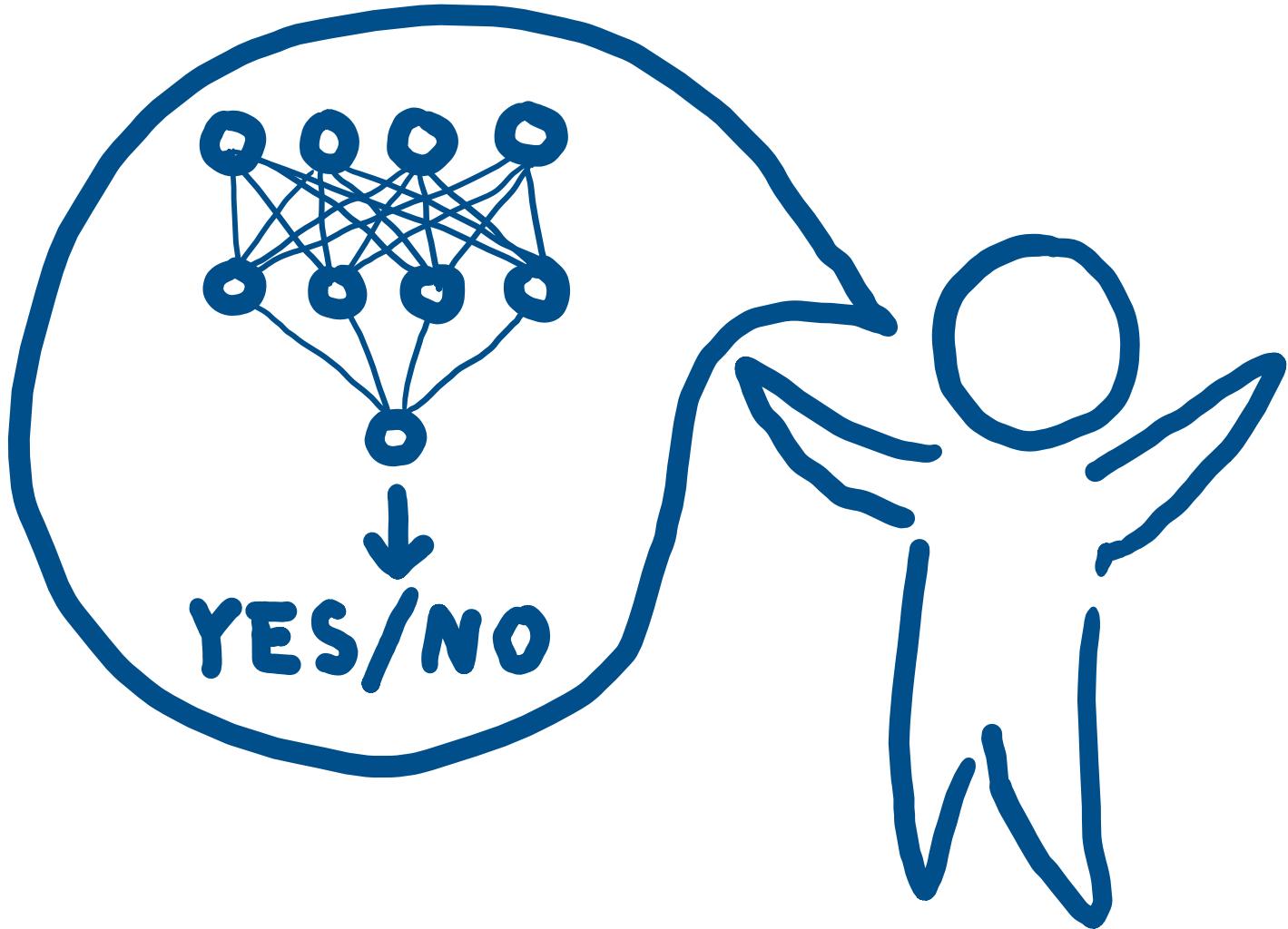
Especially for people – taking in account  
the amount and type of the data



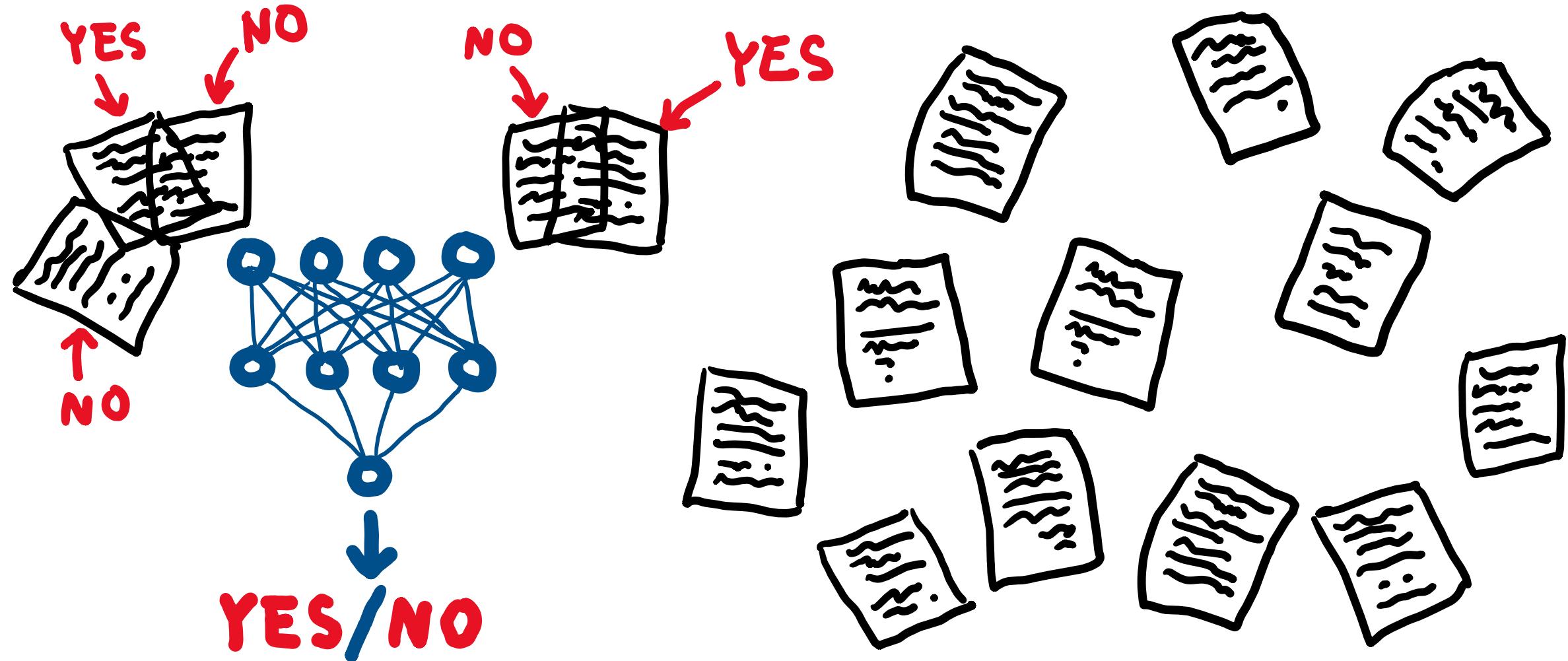
Then... would an algorithm do better?



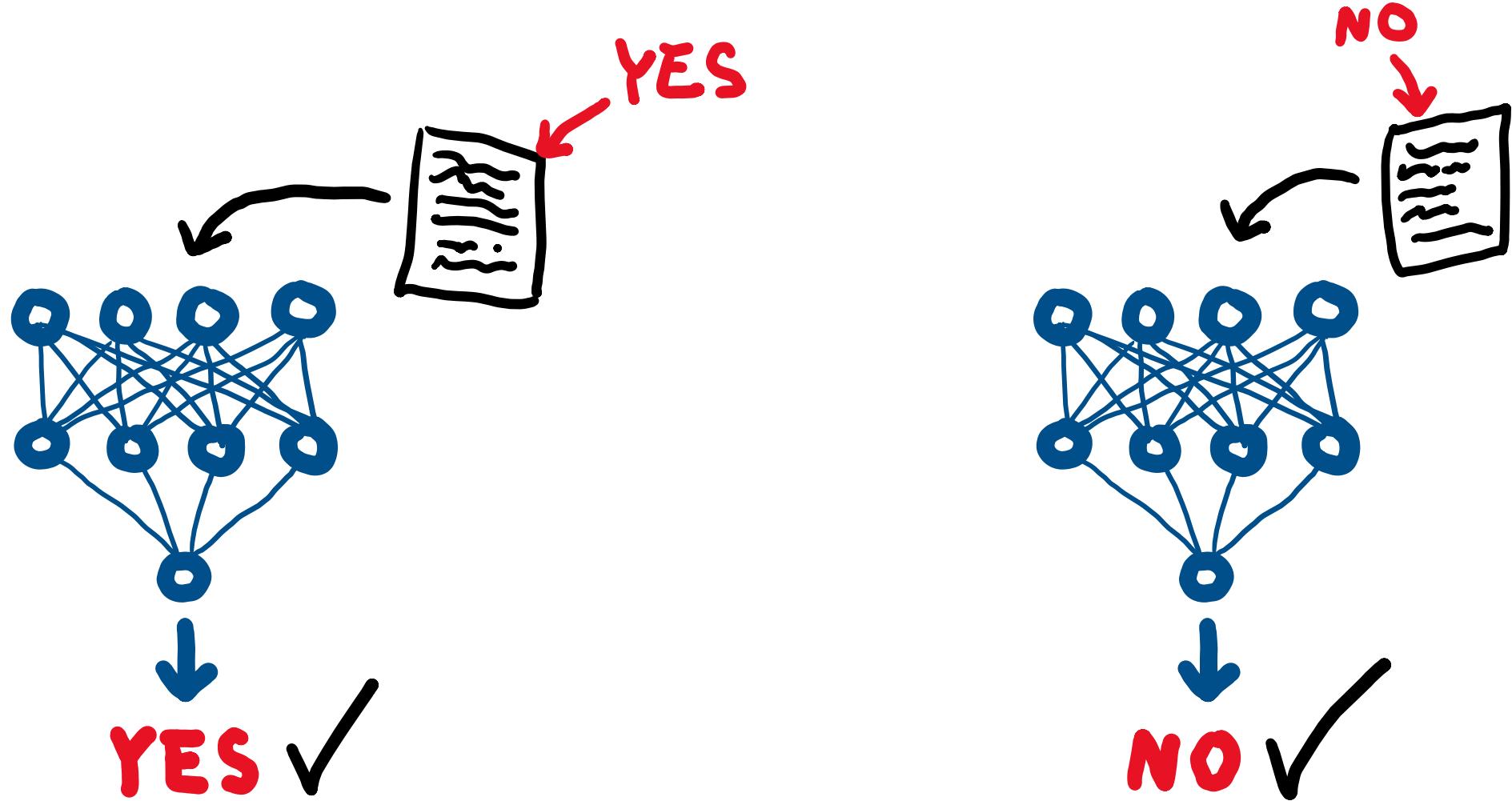
Machine learning is successful in  
processing languages



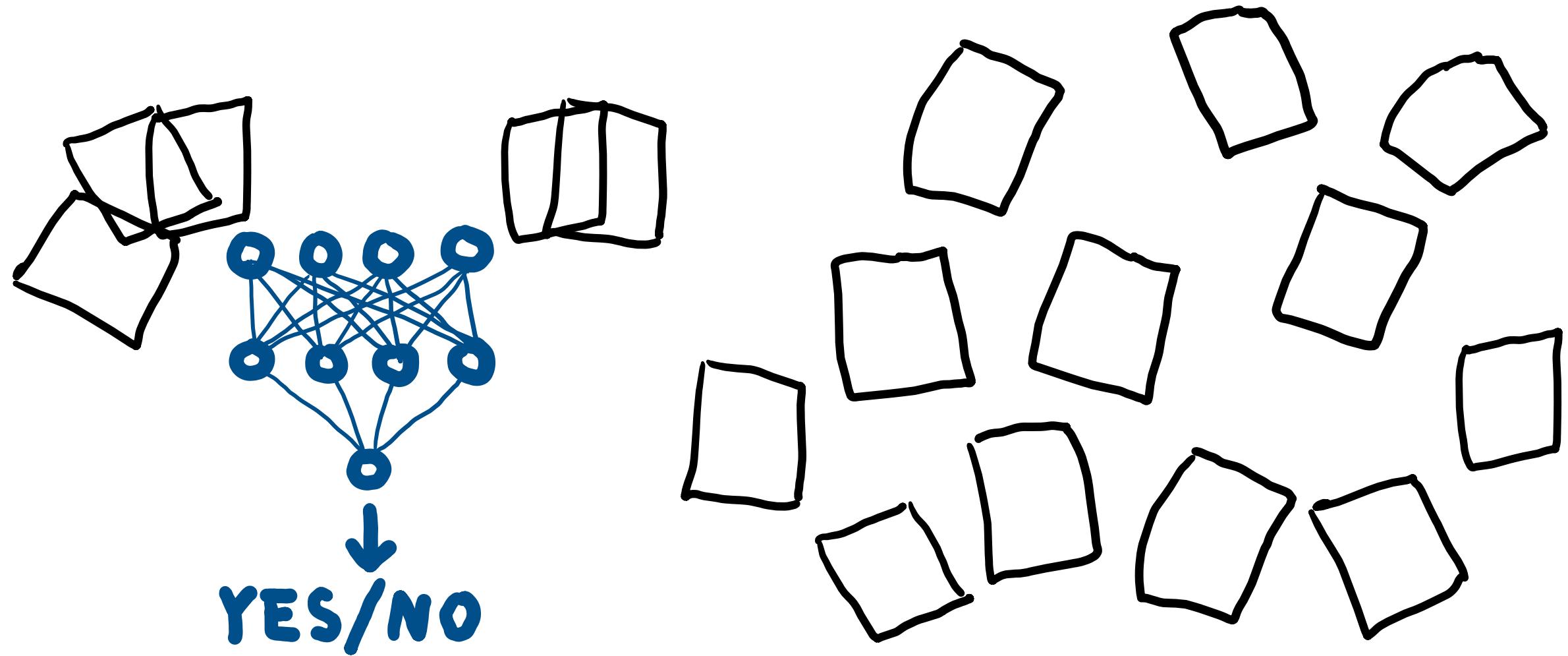
Based on existing studies and research we propose a new model



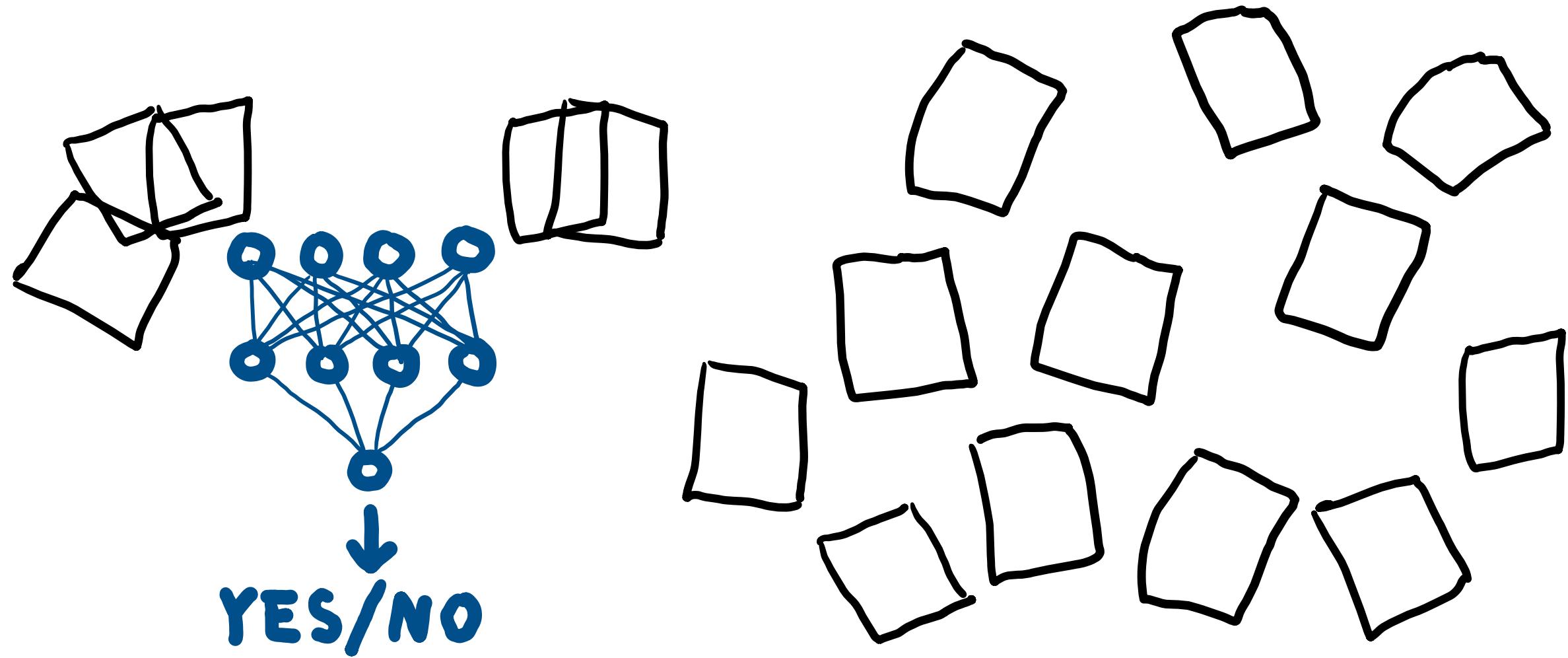
Large amount of proper training  
data is crucial



Large amount of proper training data is  
crucial



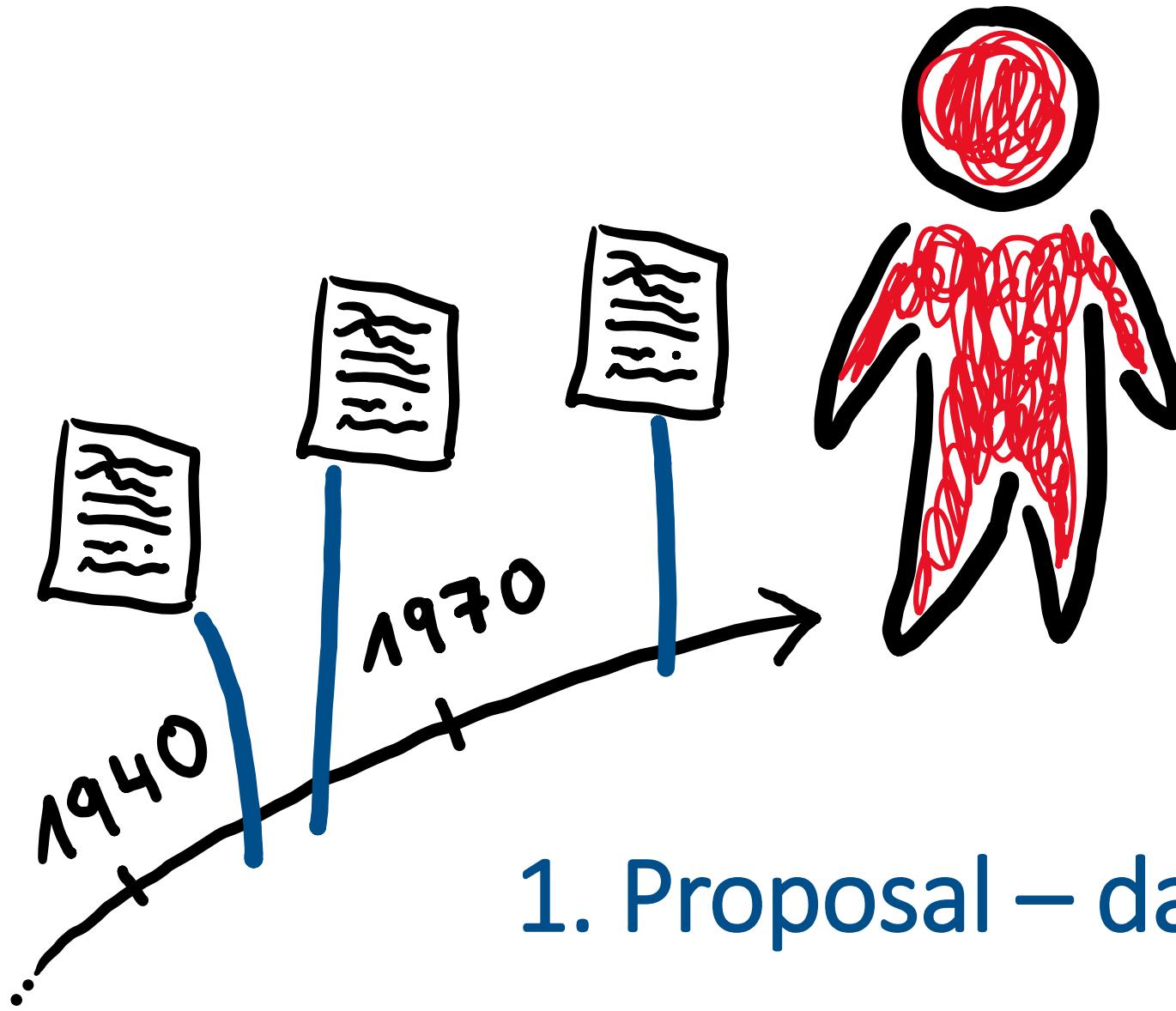
But we actually don't have the data.



How could we get it?

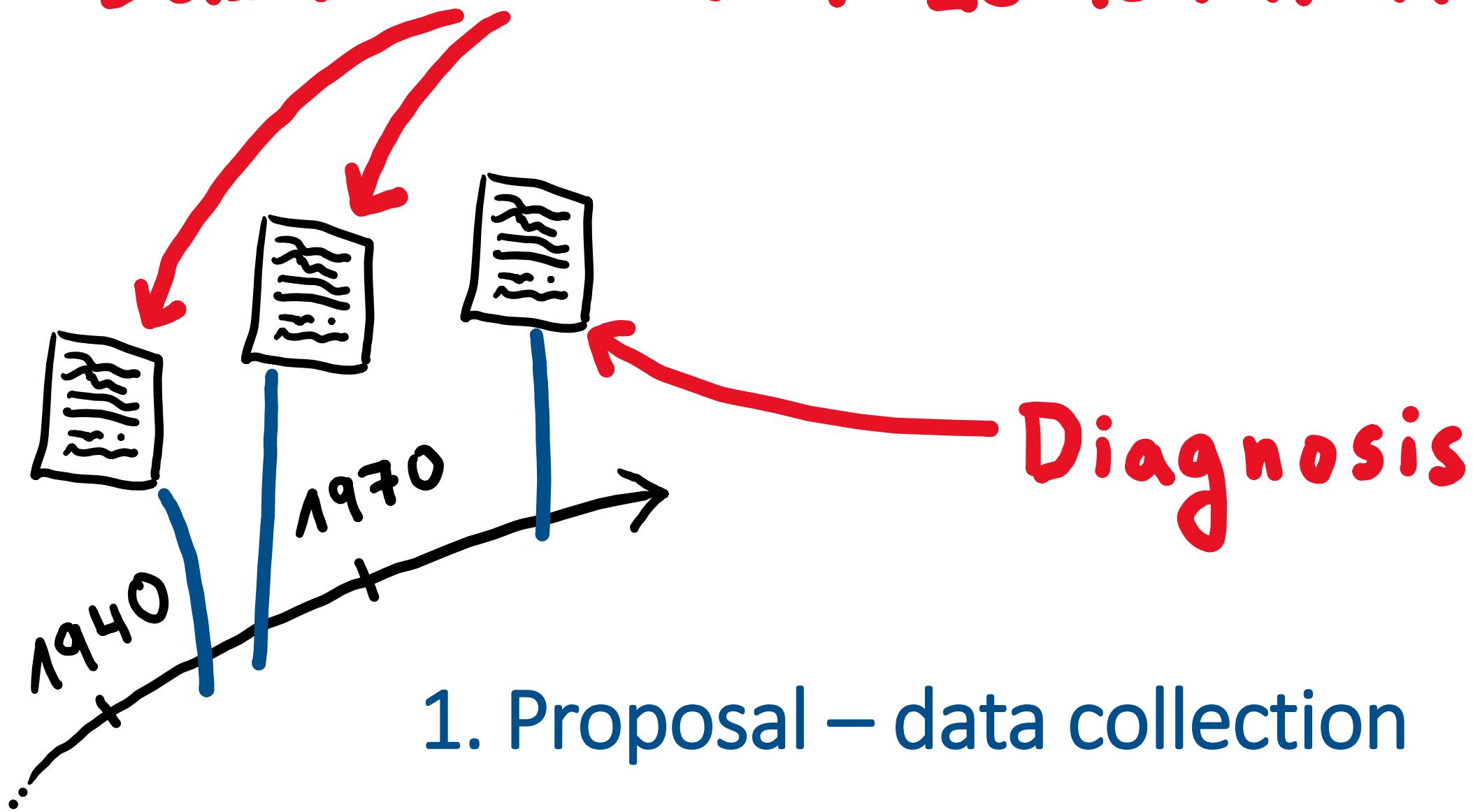
1.

Long term  
+  
retrospectively



1. Proposal – data collection

Data we need to learn from!

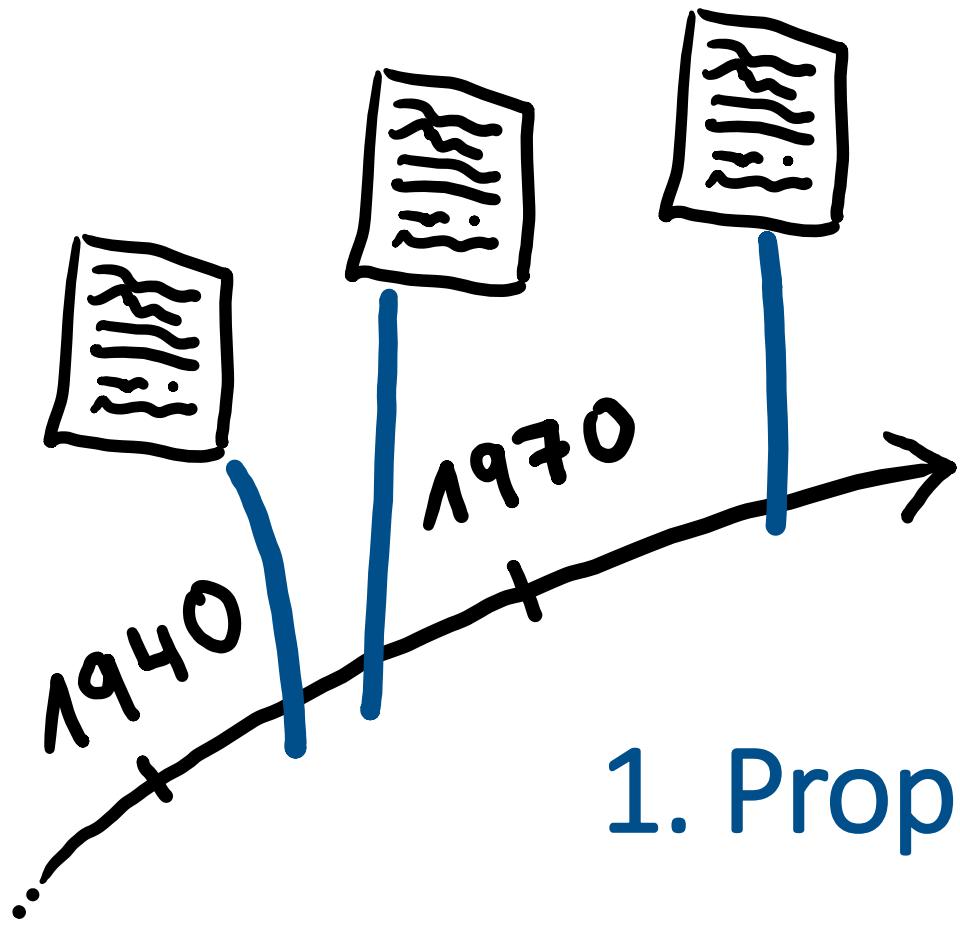


2.

Anonymized  
machine readable  
datasets

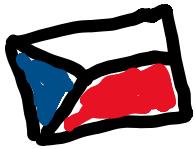


1. Proposal – data collection





Natural

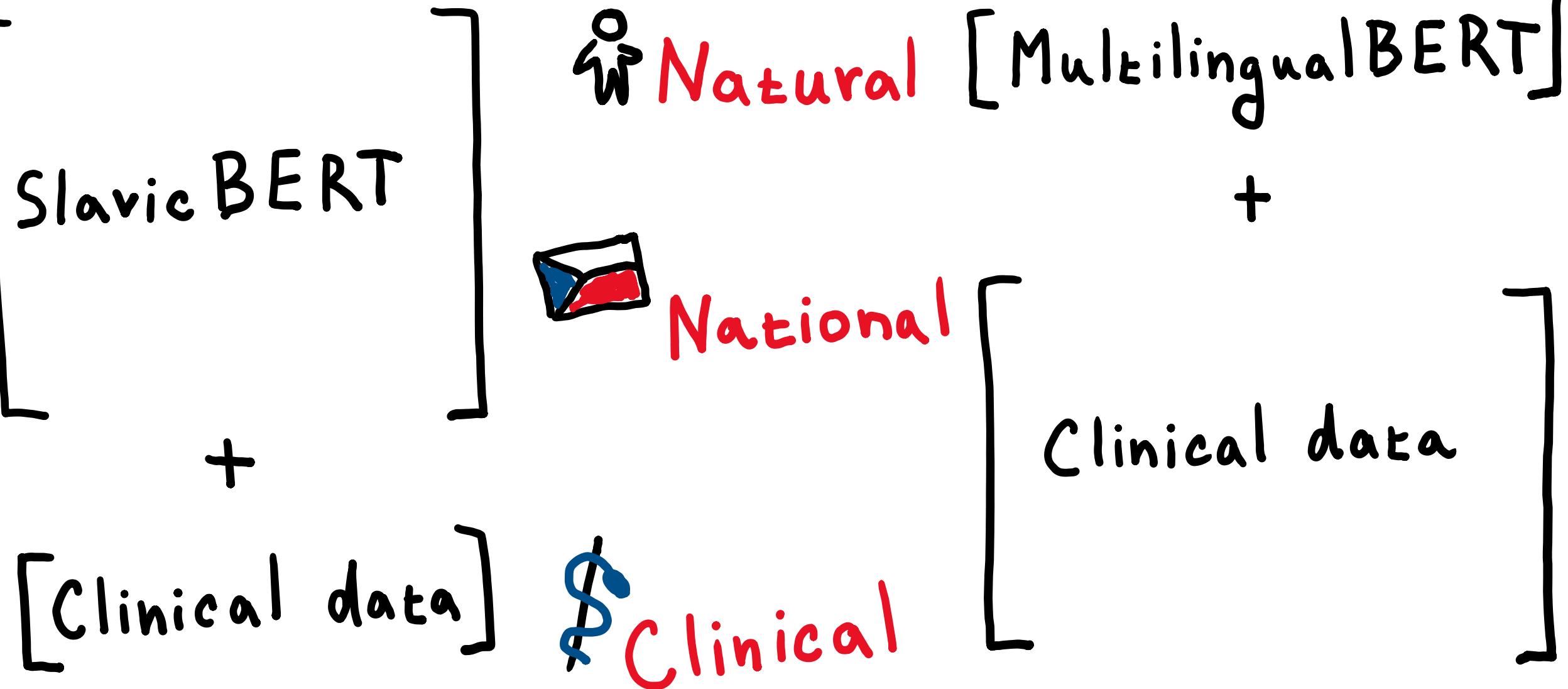


National

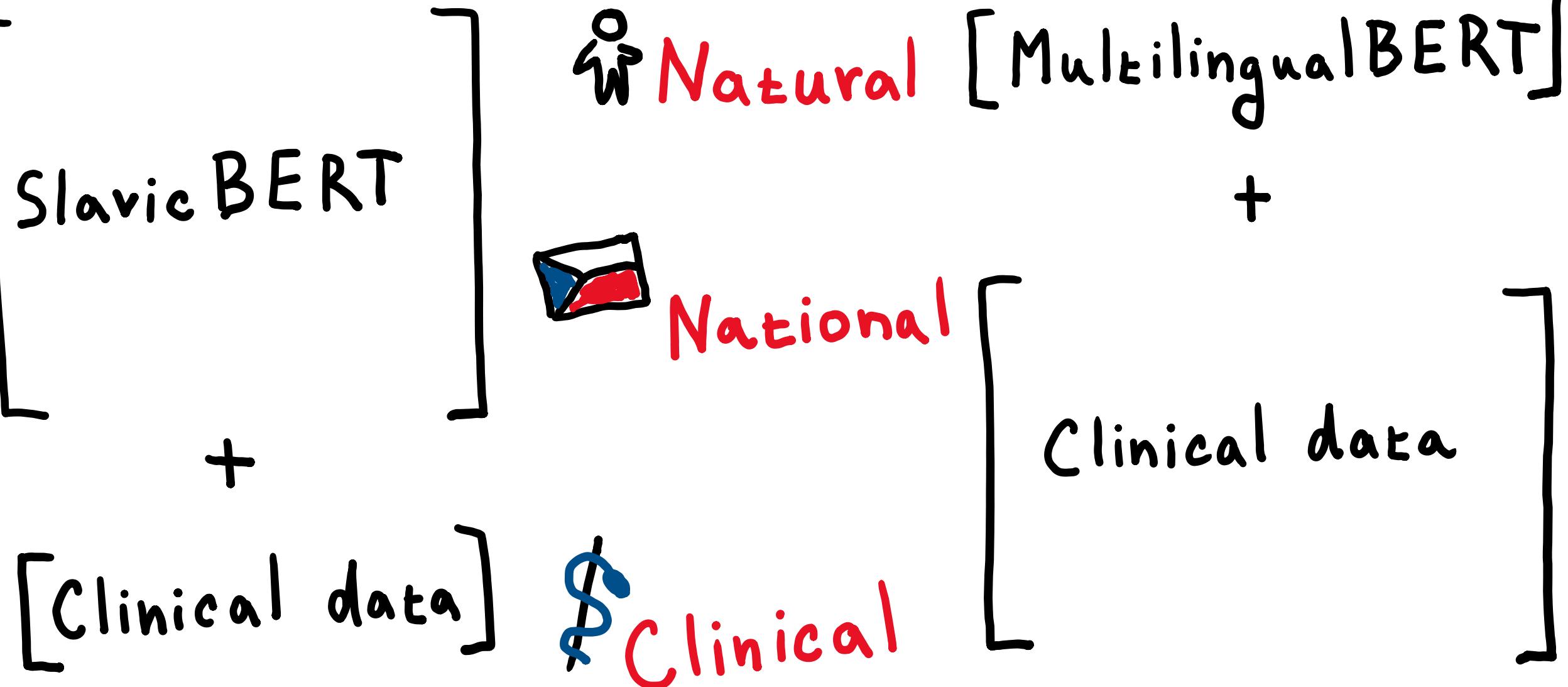


Clinical

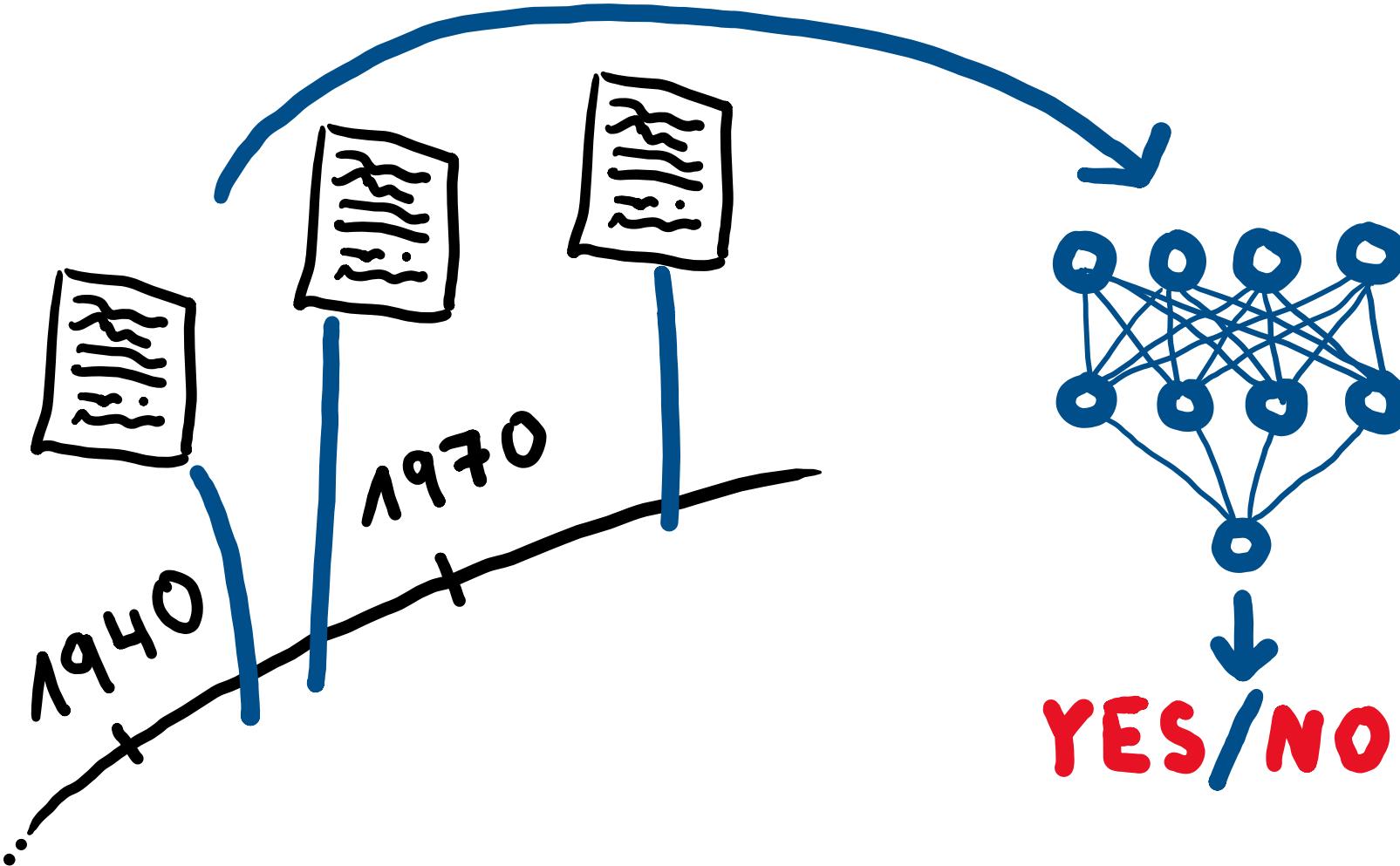
How to process the  
information?



2. Proposal – language understanding



2. Proposal – language understanding  
Fine tuning existing models



3. Proposal – combination of specific dataset  
with general Czech cNLP model

## 1 – data collection

Long term, retrospectively

Anonymized, machine readable dataset

## 2 – language understanding

Fine tuning existing models



## 3 – combination of specific dataset with general Czech cNLP model



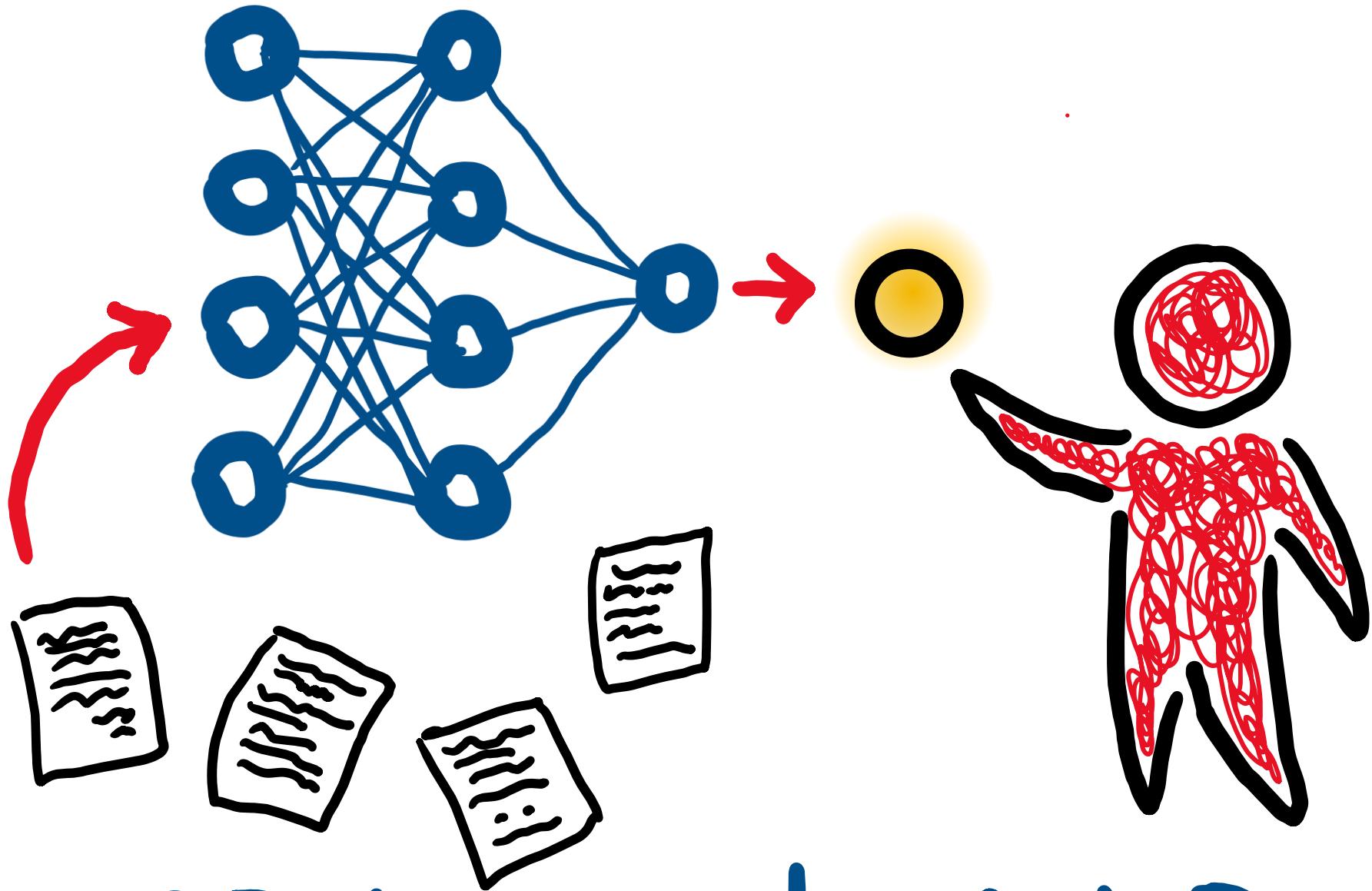
**Borek Požár**



**Tom Marius**



**Doubravka Požárová**



CZ | inical NLP