

Study on Exploratory Data Analysis

In the study, we explore some aspects about how Insight is generated from representations for Exploratory Data Analysis (EDA).

Thank you for your participation!

There are 13 questions in this survey.

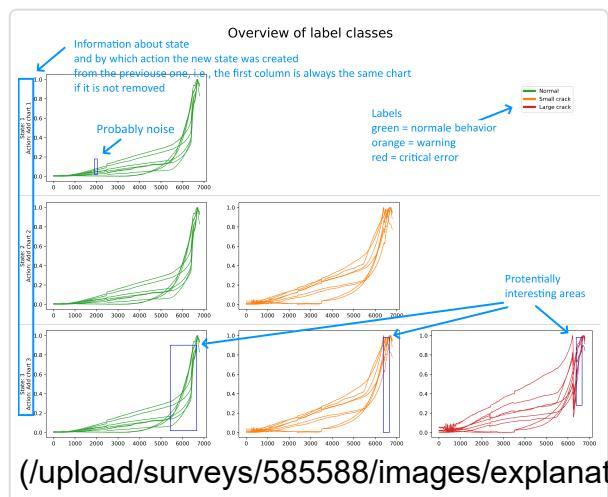
Introduction

Scenario: You are a new data scientist in a company that performs data analysis and machine learning on industrial sensor data. You are going to work on two industrial use cases: deep drawing and metal arc welding. To prepare for your future tasks you are being presented with two notebooks that contain information that will help you to generate insights about the sensor data sets.

Each notebook consists of multiple images that each show a sequence of interactions with the data. Your task will be to enter next to each sequence shown whether and, if so, which insight you have generated via following the sequence in the image (1 - 2 sentences).

Blue boxes within the charts are generated and mark regions that could potentially be of particular interest but could also be noise.

Here is an example of such an interaction sequence with explanations. You can view images in full size by clicking on them.



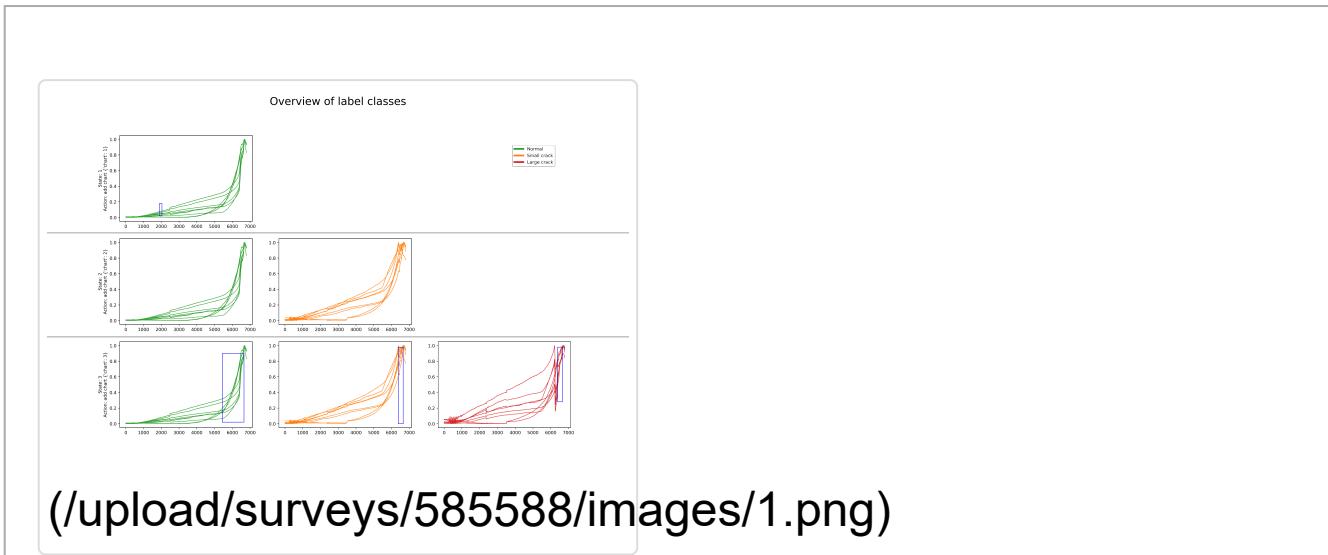
Do you have experience in data science? *

Please choose **only one** of the following:

- Yes
- No

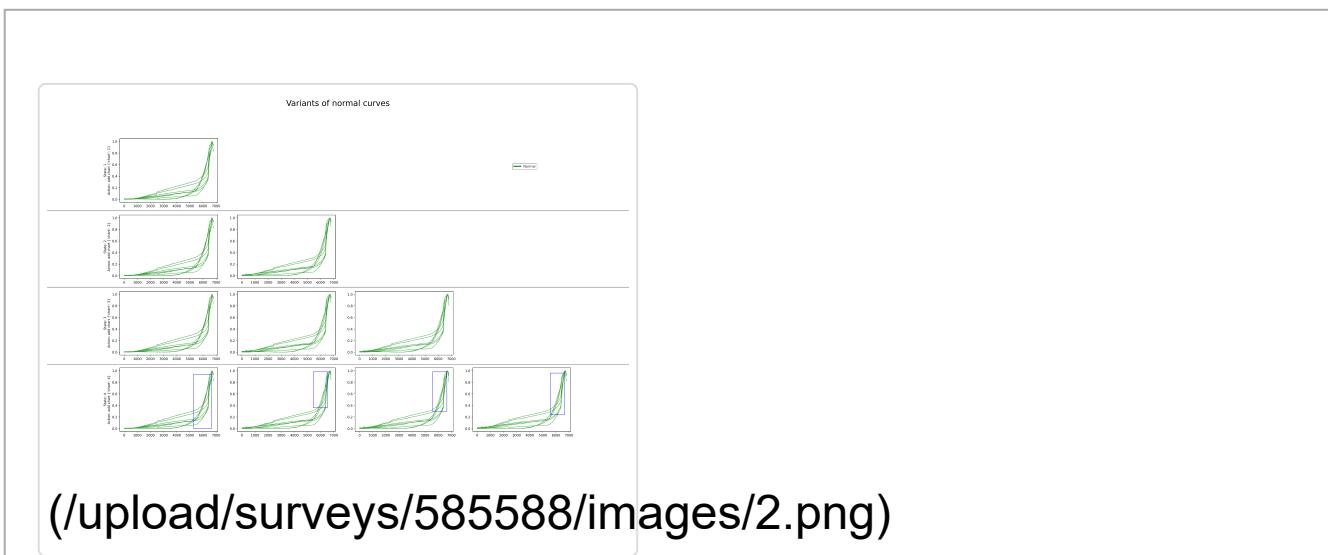
Deep drawing

Deep drawing is a sheet metal forming process in which a sheet metal blank is radially drawn into a forming die by the mechanical force of a punch. In order to digitally record the course of a stroke, the tool was equipped with **eight strain gauge sensors** at its blank holder. The deformation of the metal during a stroke sometimes causes cracks in the metal sheet resulting in a brief loss of pressure to the bottom of the tool and thus a sudden drop in the values of the strain gauge values.



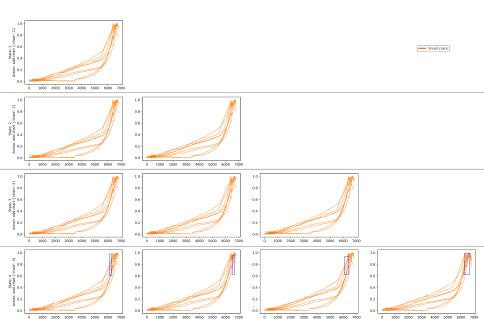
Please write your answer here:

Insight:



Please write your answer here:

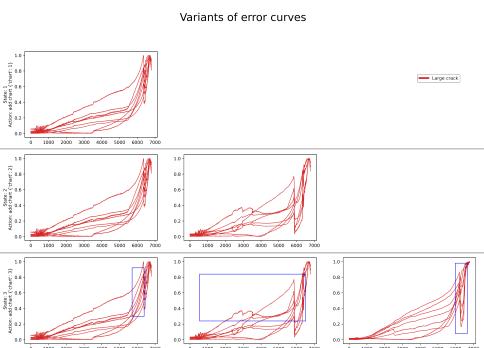
Insight:



(/upload/surveys/585588/images/3.png)

Please write your answer here:

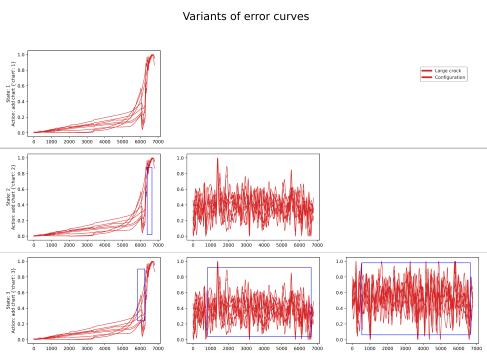
Insight:



(/upload/surveys/585588/images/4.png)

Please write your answer here:

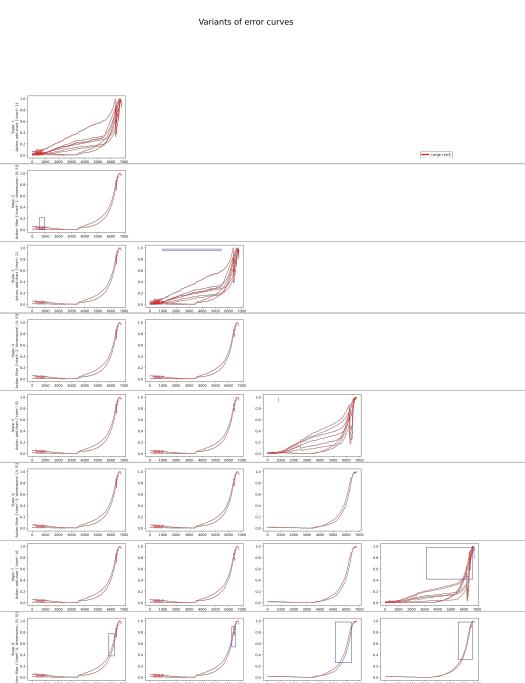
Insight:



(/upload/surveys/585588/images/5.png)

Please write your answer here:

Insight:



(/upload/surveys/585588/images/6.png)

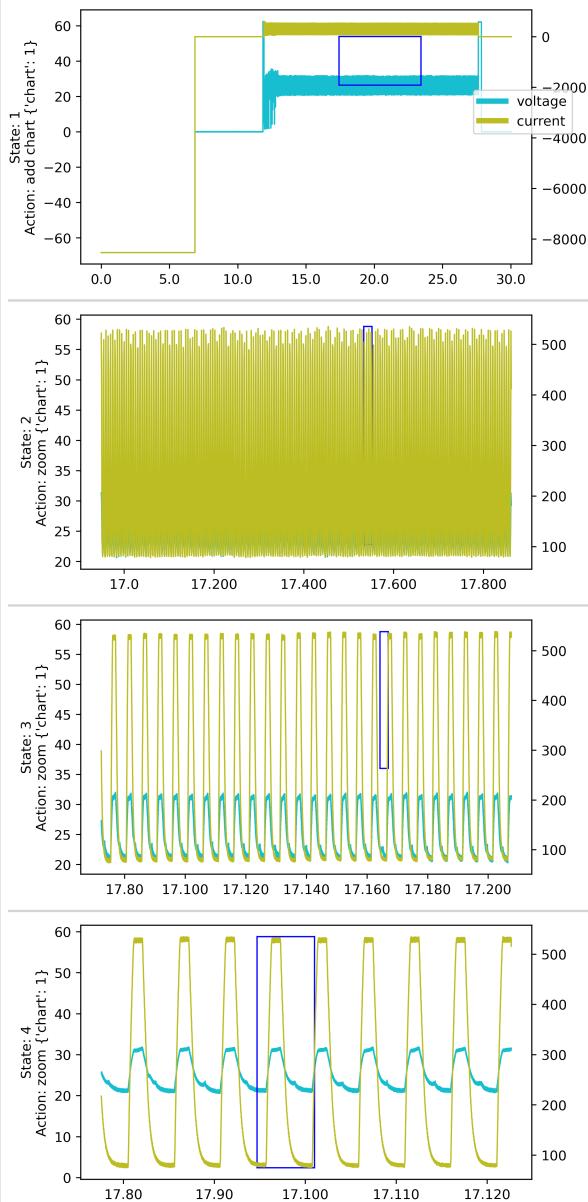
Please write your answer here:

Insight:

Metal arc welding

Metal arc welding is a fusion welding process in which electric gas is used as energy carrier. The data set contains two values: electric current and voltage. Repeated execution of both phases results in a pattern that gives insights into the quality of the resulting welding seam as a long short-circuit phase may indicate a faulty welding process with a burned or deformed welding seam.

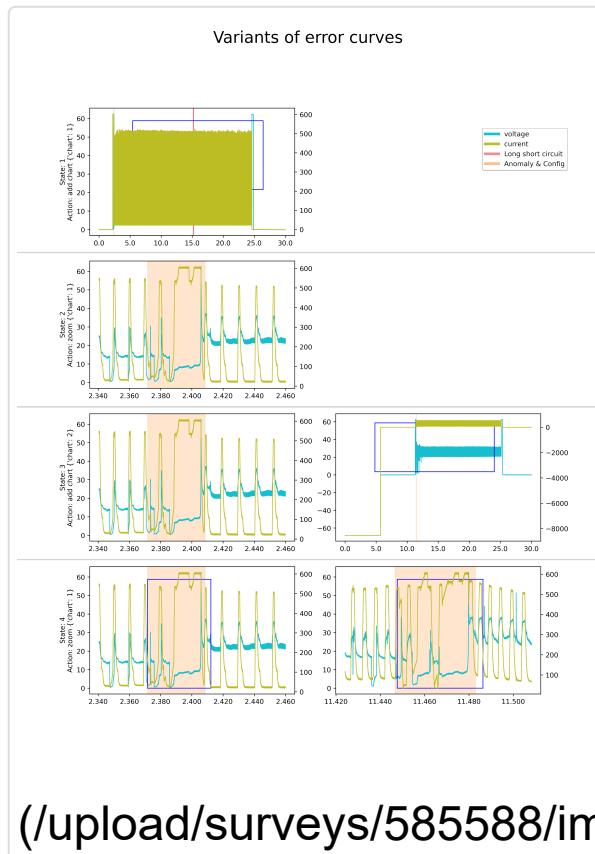
Variants of normal curves



(/upload/surveys/585588/images/7.png)

Please write your answer here:

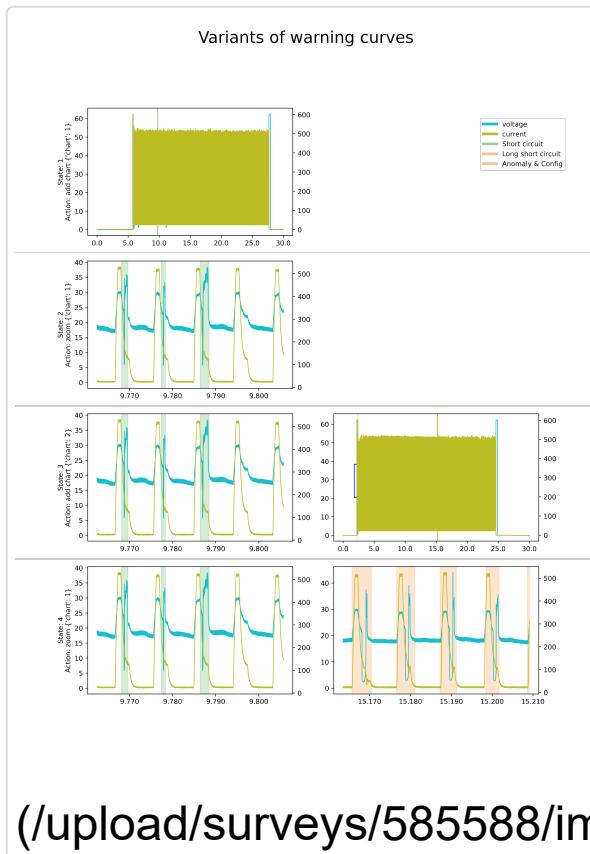
Insight:



(/upload/surveys/585588/images/8.png)

Please write your answer here:

Insight:

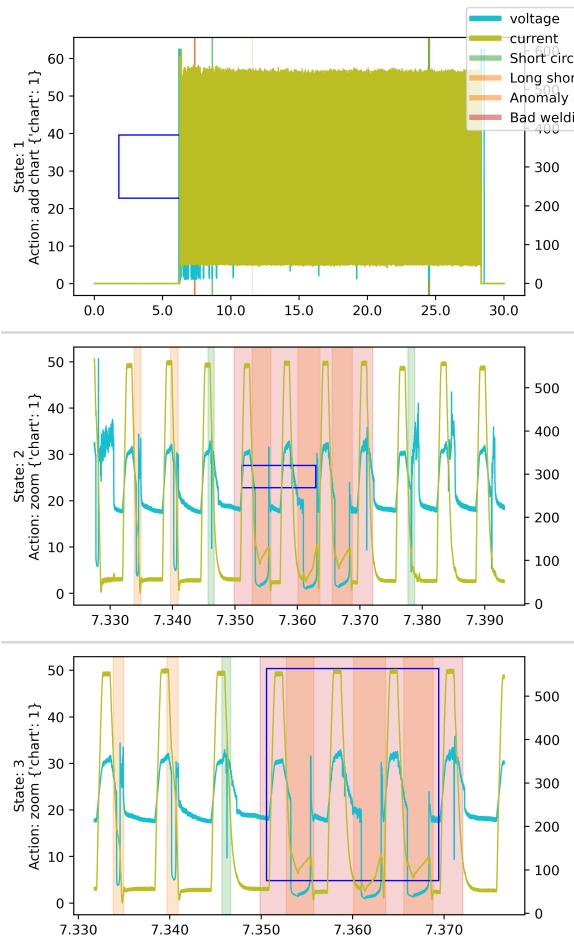


(/upload/surveys/585588/images/9.png)

Please write your answer here:

Insight:

Overview of label classes



(/upload/surveys/585588/images/10.png)

Please write your answer here:

Insight:

Conclusion

Finally, we have some concluding questions.

How often did you find the following aspects helpful: *

Please choose the appropriate response for each item:

	Always helpful	Often helpful	Sometimes helpful	Never helpful	Did not recognize
Context from showing a sequence of actions	<input type="radio"/>				
Blue marked regions of interest	<input type="radio"/>				
Titles at the top of each sequence	<input type="radio"/>				

Do you have additional feedback?

Please write your answer here:

Thanks for participating!

Submit your survey.

Thank you for completing this survey.