After an in-depth literature search to find examples for applying machine learning to related problems:

Is machine learning common for similar tasks?
Similar task "type", say classification, clustering, regression? And for related data type (images, sequences, time series, tabular data)?

→ **No** →

You enter expert territory!
It's a mine field. Consult 1 or more people with experience in applying machine-learning.

↓ **Yes**

Has machine learning been used for very similar data?
Similar here means: similar data dimensions, complexity, characteristics. Ideally even: **same sort of data!**

→ **No** → (to "You enter expert territory!")

↓ **Yes**

Is your dataset comparable (or better/bigger/richer) ?
Careful! Not only the size counts (e.g. number of samples), but also: Do you have similar amounts of labels? Enough for each class/type/category?

→ **No** →

Can you integrate other datasets?
Many machine learning techniques allow it to combine datasets with "same sort of data".

Not sure ↑ (to "You enter expert territory!")

No ↓ (to "Any of the following?")

Yes → (to "Good enough...")

↓ **Yes**

Good enough if you achieve comparable results?
Compared to very related work using machine learning (if dataset roughly comparable in size/quality).

→ **No** →

Any of the following?
☐ Larger/better dataset?
☐ More/better labels?
☐ Good knowledge of technique to improve things?

Yes ↓

No ↓

↓ **Yes**

Adapting current machine learning solutions seems promising!

Seems worth exploring!

Seems you're expecting magic.