THE DATA CARDS PLAYBOOK • ACTIVITY WORKBOOK

Scopes Brainstorm

Participatory activities for purposeful, transparent, and people-centric dataset documentation

pair-code.github.io/datacardsplaybook↗

#datacardsplaybook

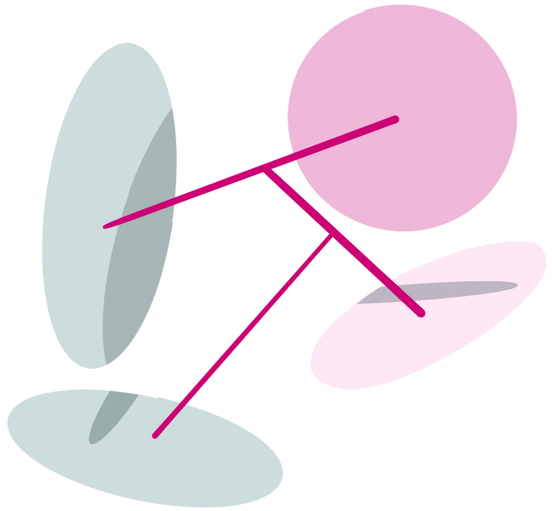
Scopes Brainstorm

Prerequisite checklist

BEFORE YOU BEGIN

–

- → Read through Optics and Scopes Guide
- → Define your agents using Priority Matrix and/or Align on Agents
- → Complete a Lens Brainstorm
- → Update results from aforementioned in the Activity Tracker for future reference



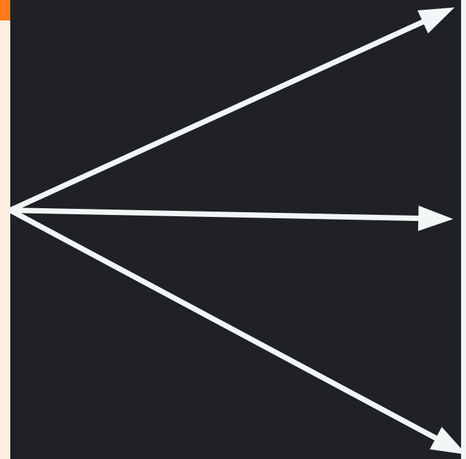
Scopes Brainstorm

Lens: Origins

As a: ML data scientist

I want to know:
about any fairness considerations made when designing the dataset.

ORIGINS: A short, succinct statement that conveys a single idea about the early stages of a dataset's lifecycle when decisions to create a dataset are made.



Scopes

I want to know:
about any fairness considerations made when designing the dataset.

So I ask:

Does this data contain protected or sensitive information?

Telescopic Questions: ask about attributes commonly found across multiple datasets.

What types of protected, sensitive, or human information does it contain?

Periscopic Questions: ask about attributes specific to the dataset being created or documented.

Why was this information collected? If any, **what steps were taken** to protect this information?

Microscopic Questions: ask about unobservable and implicit aspects of the dataset.

Scopes Brainstorm

Lens: n=1

As a: ML data scientist

I want to know:
about limitations and constraints in the labels of image examples.

n=1: A short, succinct statement that conveys a single idea about actual samples of data - in distribution, out-of-distribution, etc.

Scopes

I want to know:
about limitations and constraints in the labels of image examples.

So I ask:

What type of labeling methods were applied to the dataset?

Telescopic Questions: ask about attributes commonly found across multiple datasets.

Were algorithmic labels generated from the publisher's algorithm?

Periscopic Questions: ask about attributes specific to the dataset being created or documented.

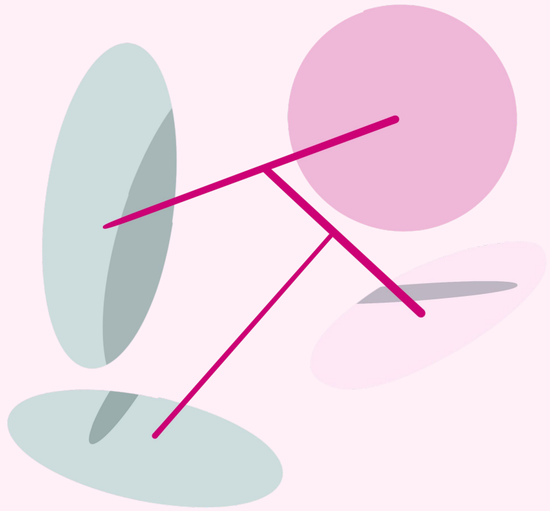
How were free-form labels and images obtained? **What types** of constraints were provided? **Who provided** these labels?

Microscopic Questions: ask about unobservable and implicit aspects of the dataset.

Scopes Brainstorm

Break down Lenses into cohesive sets of Scopes – concrete questions that you'll answer in your Data Card.

- Unpack each Lens into multiple telescopic, periscopic, and microscopic questions
- Scopes offer a concrete path for agents to assess datasets
- Relationships and patterns in Scopes create structures to organize information in Data Cards and templates



Break down Lenses in the Scopes Brainstorm

Activity — Scopes Brainstorm

Step 1: Review your prioritized Lenses

Step 2: Individually or in pairs, fill out as many scope cards as possible for each Lens

Step 3: Prioritize your scope cards and share with the group

Step 4: Cluster and vote on your most important Scopes

Step 5: Transfer results to the Scopes Brainstorm tab in your tracker

Scopes are the building blocks for your Data Card template.

Activity — Scopes Brainstorm

Lens	So I ask **[Telescopic question]**	So I ask **[Periscopic question]**	So I ask **[Microscopic question]**
Lens			
Lens			
Lens			

Fill out scope cards. Refine Lenses if needed, but avoid creating new ones.

Scopes are questions that are asked in quick succession to make sense of the world around us. Scopes can be questions or prompts about:

TELESCOPIC: Attributes commonly found across multiple datasets. When thinking of telescopic Scopes, think of questions that elicit indexable “characteristics”.

PERISCOPIC: Attributes specific to your dataset. When thinking of periscopic Scopes, think of questions that describe “observations” and “evidence”.

MICROSCOPIC: Unobservable aspects of the dataset. When thinking of telescopic Scopes, think of questions that demand “explanations”, or descriptions of rationale and extrinsic considerations.

Pro-tips for the Scopes Brainstorm

💬 **Keep it conversational**
Don’t be overly technical in how you write your Scopes

❓ **Ask follow-up questions**
Ask yourself or your teammates questions to dive deeper

🦁 **Know that overlaps are still ok**
Don’t worry if there are overlaps in your Scopes

🖨️ **Consider varied perspectives**
Think about how different agents might frame the same question

Next steps

OUTCOMES

–

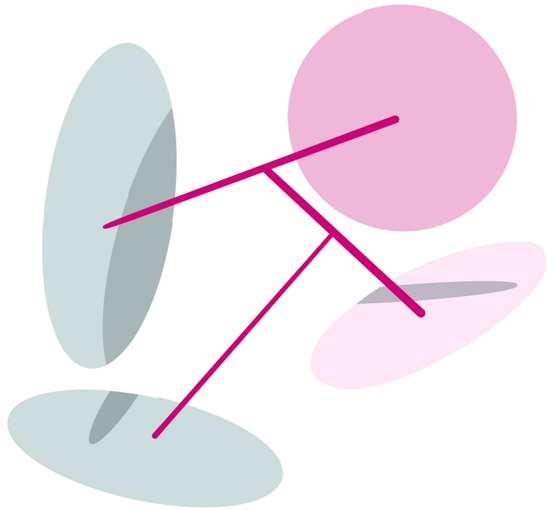
Lenses broken down into questions or prompts for your Data Card template.

FOLLOW UP

–

→ Update your Activity Tracker

→ Next: Templatize



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