Robot Screener

Robot Screener is *type* of Dual Screening where one of the traditionally human reviewers is replaced by an automated substitute.

Enabling Robot Screener

Robot Screener may be enabled from Screening Settings. When Dual Screening mode (standard or two pass) is switched on, Robot Screener can be switched on under "Screening Model". Before Robot Screener can be enabled, the nest must:

- Be configured for Dual Screening and Adjudication
- And contain **50** adjudicated *records* (i.e. having an adjudicated screening decision, abstract or full text)
- And contain **10** included records (or abstract advanced for two pass mode)

The latter two requirements help ensure a minimum model accuracy; however, the model will usually be suboptimal with this volume of training data, and typically improves as more records are screened.

By enabling Robot Screener, automatic updating to the screening model is made non-optional, as is the hiding of inclusion probabilities. This avoids biasing human reviewers with data already being used by Robot Screener.

When switching on Robot Screener, you will see the below modal. In red are the actual numbers of adjudicated and included or advanced records compared to the numbers you need to meet in order to Enable Robot Screener:

In Action

Which Records

Robot Screener automatically adds a single reviewer-level screening decision to records with:

- Fewer than 2 reviewer-level screening decisions
- No adjudicated screening decision

Records it excludes will assigned the exclusion reason `Robot Excluded` in all cases.

When

Robot Screener adds/updates its screening decisions when:

- Robot Screener is enabled
- A new Screening model is trained
- New records are imported into your nest
- 10 additional records have been adjudicated, since the model was last trained

As pointed out above, Robot Screener will not modify its decision on a record after that record has been adjudicated. Prior to adjudication, its decision on a record may be modified, reflecting more information available to it & improvement in its accuracy.

Usage Guidance

Robot Screener, by accuracy, is not a replacement for a human reviewer. It should typically be used for reviews where budget, team size, or time available are restricted. Some additional usage tips:

- While Robot Screener may be enabled at 50 adjudicated / 10 included records, we typically advise not enabling it until a cross validation recall of 0.7 or greater is achieved.
- Only use the "Auto-adjudicate" button when you are confident in trusting a single human review with only the Robot as a 'check'. This may mean manually reviewing records that the human and Robot agree on, especially early on. This will improve the quality of your review, reduce later reworks, and produce better training data for Robot Screener.

Learn more about the Screening model that powers Robot Screener here.

Why can't I turn on Robot Screener yet?

It may be due to not having enough screening decisions in your nest. See the requirements above.

If you are in Dual Two Pass Screening mode, Robot Screener can be used for *both* Abstract Screening and Full Text Screening but the requirements must be met separately.

- Abstract Screening requires **50** abstract adjudicated records, either advanced or excluded under Abstract Screening –> Adjudicate Screening, and **10** advanced records

- These actions must be performed before Robot Screener can be turned on for Abstract Screening

- Full Text Screening requires **50** full text adjudicated records, either included or excluded under Full Text Screening –> Adjudicate Screening, and **10** included records
  - These actions must be performed before Robot Screener can be turned on for Full Text Screening

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