

ORACLE

Strategies to generate utterances

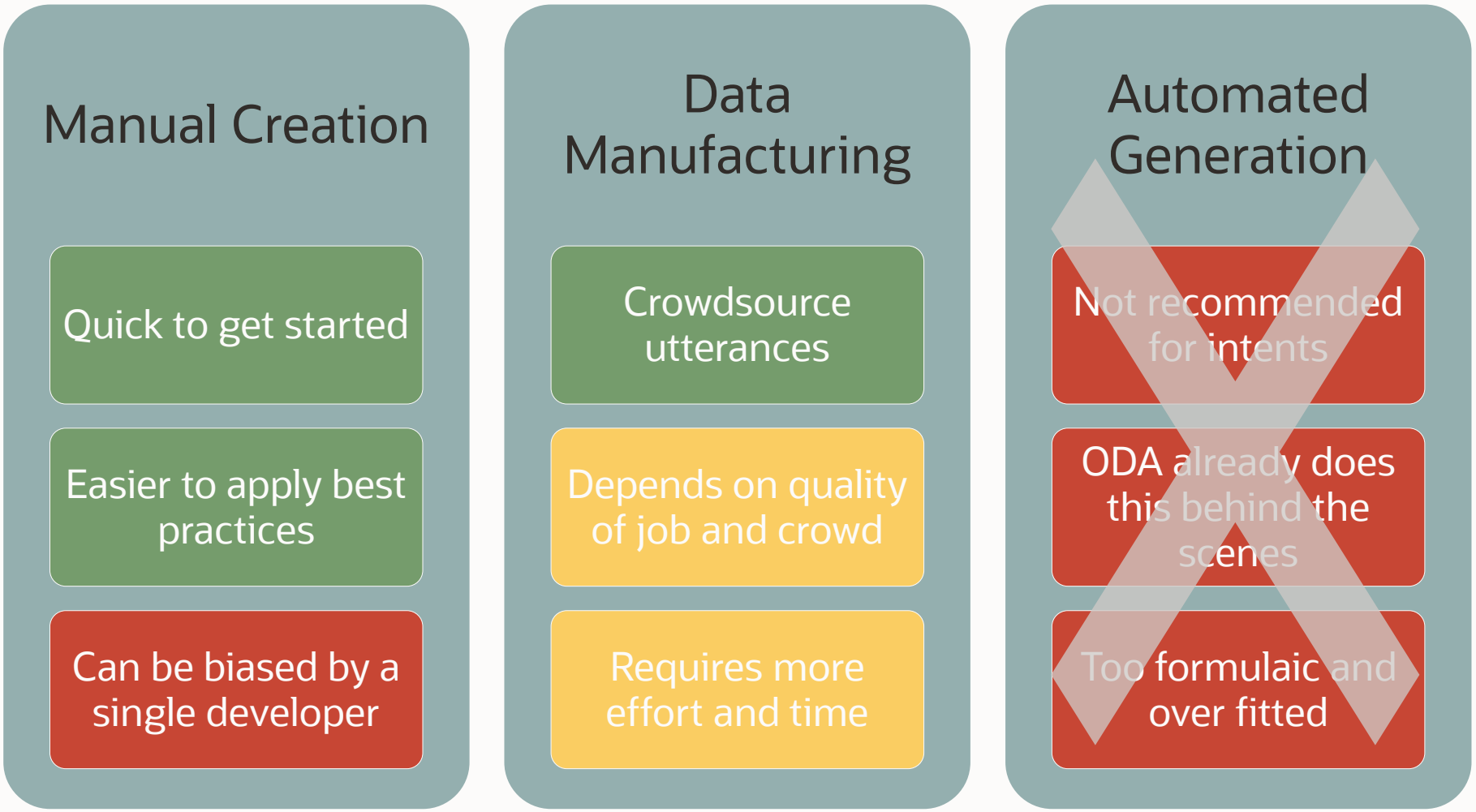
Program agenda

- 1 Strategies to generate utterances
- 2 Crowd sourcing
- 3 Manual creation
- 4 Mixed

Program agenda

- 1 **Strategies to generate utterances**
- 2 Crowd sourcing
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Strategies to generate utterances



Program agenda

- 1 Strategies to generate utterances
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Crowd sourcing

” Data sourcing helps to put the theory of good utterances into practice

Data sources

- Customer support systems
 - Unlabeled data
- Crowd-sourcing
 - Labeled data
- "Insights" in Oracle Digital Assistant
 - Incrementally available after first roll-out

Crowd sourcing in Oracle Digital Assistant with data manufacturing

A native feature of Oracle Digital Assistant skills

Allows you to create paraphrasing, annotation and validation jobs for

- Intents
- ML Entities

A "job" results in a URL you share with crowd workers

- URL displays form for crowd workers to complete their task

At the end of each job

- You can review the collected data and download them for editing

Data manufacturing for intents

/// Ensures that all use cases are covered to avoid gaps or overlaps in the utterances ///

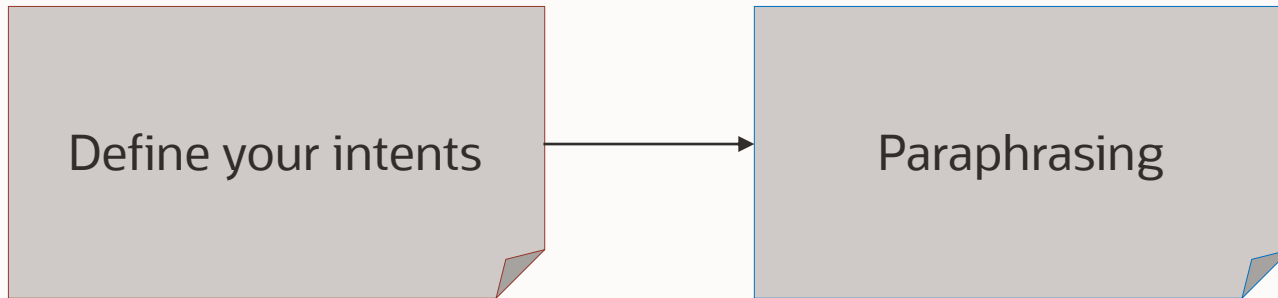


Define your intents

Data manufacturing for intents

Ensures that all use cases are covered to avoid gaps or overlaps in the utterances

Crowd sourcing of utterances

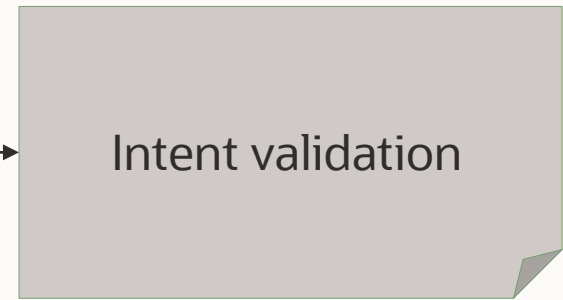
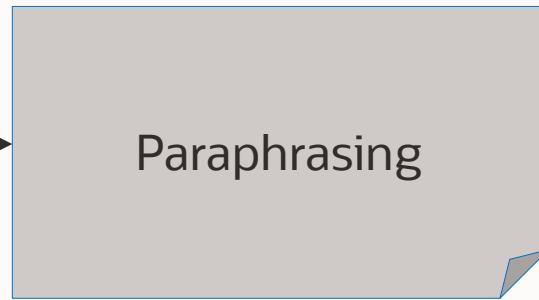
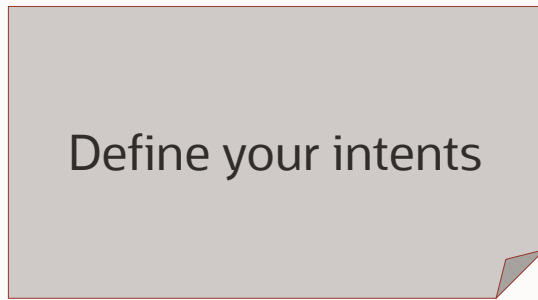


Data manufacturing for intents

Ensures that all use cases are covered to avoid gaps or overlaps in the utterances

Crowd sourcing of utterances

Fine tuning and error prevention



”

There is no point in overloading crowd workers. Consider multiple crowd sourcing jobs.

Creating a data manufacturing job for intent paraphrasing

The screenshot shows a 'Job Configuration' form with the following fields and options:

- Job Type:** Intent Paraphrasing
- Job Name:** Expenseltems_Find
- Language:** English
- Paraphrases per Intent:** 100
- Select intents or upload a CSV sheet:** Includes 'Select' and 'Upload' buttons.
- Add intents:** A list containing 'find expense items ×'.
- Checkboxes:** An unchecked checkbox labeled 'Select all 7 intents'.

A vertical sidebar on the left contains icons for navigation and actions: back, chat, undo/redo, refresh, search, add, and settings.

Paraphrasing, annotation, validation

You don't need many utterances for a start and can re-run jobs later or use data found in Insights

A job can handle one or many intents

Creating a data manufacturing job for intent paraphrasing

Job Configuration

Job Type
Intent Paraphrasing

Job Name ⓘ
Expenseltems_Find

Language ⓘ
English

Paraphrases per Intent
100

Select intents or upload a CSV sheet.

Add intents
find expense items ×

Select all 7 intents

Edit Prompts and Hints ×

✓ 2

Config Review

Job Review

Intent	Prompt (required) ⓘ	Hint (optional) ⓘ	
reg.expenseitem.find	How would you search for an expense item using a statement?	"I need a list of all expenses from last week that I filed on gas", or "Help me with a list of expenses I filed yesterday"	<input type="button" value="edit"/> <input type="button" value="delete"/> <input type="button" value="add"/>
reg.expenseitem.find	How would you search for an expense item using a question?	"Can you show me the expense I submitted for a purchase from Apple last week?", or "Could you list expenses from last week that still show as pending?"	<input type="button" value="edit"/> <input type="button" value="delete"/> <input type="button" value="add"/>
reg.expenseitem.find	How would you search for an expense item in a demanding voice?	"Show Internet expenses from last month", or "Print expenses that are not paid yet"	<input type="button" value="edit"/> <input type="button" value="delete"/> <input type="button" value="add"/>

/// Create multiple prompts to guide crowd workers ///



Monitoring a data manufacturing job for intent paraphrasing

The screenshot shows a web interface for monitoring data manufacturing jobs. On the left is a vertical sidebar with icons for home, jobs, results, chat, settings, and other functions. The main area is titled 'Data Manufacturing' and has two tabs: 'Jobs' (active) and 'Results'. Below the tabs are several filters: a 'New Job' button, an input field for 'Enter job name', and dropdown menus for 'Job Type' (set to 'All'), 'Job Status' (set to 'All'), and 'Language' (set to 'All'). There is also a 'Sort by' dropdown set to 'Updated Date de' and a refresh icon. Below the filters is a table with the following columns: Job Name, Last Modified Date, Type, Status, Progress, and a 'Copy Link' button. A single job is listed: 'Expenseltems_Find' with a last modified date of '9/13/2021', type 'Intent Paraphrasing', status 'Running' (highlighted in blue), and progress '0%' with '0 submitted' items. A context menu is open over the job row, containing options: 'Cancel', 'Duplicate', 'View Interim Results', and 'View Configuration'.

Job Name	Last Modified Date	Type	Status	Progress	Copy Link
Expenseltems_Find	9/13/2021	Intent Paraphrasing	Running	0% 0 submitted	Copy Link

- Cancel
- Duplicate
- View Interim Results
- View Configuration



Paraphrasing form

Intent Paraphrasing

You have submitted 0 paraphrases so far



Skip

Submit

Read Task and Hint. Provide utterances you would use to achieve the task.

Language

English

Task

How would you search for an expense item using a statement?

Hint

"I need a list of all expenses from last week that I filed on gas", or "Help me with a list of expenses I filed yesterday"

I require an overview of items I filed last week on breakfast

+ Add Another Utterance

We need a summary of what we have filed last week for dinner

Delete

I am looking for an expense item from last month for gas

Delete

I am in the need to see the the expense I did 7 days ago for gasoline

Delete

I need you to show a list of expense items from this month that cover Internet access

Delete

I want you to show me an overview of non-food expenses I did yesterday

Delete

Seeing results

Skills • Expenses Data Manufacturing Draft • 1.1 - 21.08 Findings Preview Validate Train

Data Manufacturing

Jobs **Results**

Upload Job Type: All Review Status: All Language: All From: To: Sort by: Name asc

Name	Created Date	Count	Source	Type	Review Status
Expenseltems_Find	9/13/2021	26	Job	Intent Paraphrasing	Accept Reject ...

View
Download



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The next steps show case how quickly and easily a developer can create utterances to fast-track development

Bootstrapping utterances - start with a couple of key phrases

Password Request Intent

I want to reset my
password

I can't log into email

Create variations around the key words

I want to reset my password

I want to reset my
password

I want to reset my
password

I'd like to reset my
password

I need to be able to
reset my password

Can you reset my
password

Duplicate those and change some of the keywords

I want to reset my password

I want to reset my
password

I want to reset my
password

I'd like to reset my
password

I need to be able to
reset my password

Can you reset my
password

I want to change my
password

I'd like to change my
password

I need to be able to
change my password

Can you change my
password

And again, this time changing the object of the sentence

I want to reset my password

I want to reset my
password

I want to reset my
password

I'd like to reset my
password

I need to be able to
reset my password

Can you reset my
password

I want to change my
password

I'd like to change my
password

I need to be able to
change my password

Can you change my
password

I want to change my
credentials

I'd like to change my
credentials

I need to be able to
change my credentials

Can you change my
credentials

Sort your phrases

I want to reset my password

Can you change my credentials

Can you change my password

Can you reset my password

I need to be able to change my credentials

I need to be able to change my password

I need to be able to reset my password

I want to change my credentials

I want to change my password

I want to reset my password

I'd like to change my credentials

I'd like to change my password

I'd like to reset my password

Change some words to bring in natural variance

I want to reset my password

Can you change my credentials

Can you change my password

Can you reset my password

I need to be able to change my credentials

I need to be able to change my password

I need to be able to reset my password

I want to change my credentials

I want to change my password

I want to reset my password

I'd like to change my credentials

I'd like to change my password

I'd like to reset my password

Can you change my logon credentials

Change my password

Please reset my password

I need to be able to change my credentials

I wanna to change my password

I need to be able to reset my password

We want to change the credentials

How do I change my password

I want to reset my password

How would you change my credentials

I'd like to change my password

We'd like to reset a password

Duplicate some phrases and add new key terms

I want to reset my password

Can you change my credentials

Can you change my password

Can you reset my password

I need to be able to change my credentials

I need to be able to change my password

I need to be able to reset my password

I want to change my credentials

I want to change my password

I want to reset my password

I'd like to change my credentials

I'd like to change my password

I'd like to reset my password

Can you change my logon credentials

Change my password

Please reset my password

I need to be able to change my credentials

I wanna to change my password

I need to be able to reset my password

We want to change the credentials

How do I change my password

I want to reset my password

How would you change my credentials

I'd like to change my password

We'd like to reset a password

Can you change my logon credentials

Change my password

Please reset my password

I need to be able to change my credentials

I wanna to change my password

I need to be able to reset my password

We want to change the credentials

How do I change my password

I want to reset my password

How would you change my credentials

I'd like to change my password

We'd like to reset a password

How do I **update** my password

I want to **update** my password

How would you **update** my credentials

I'd like to **alter** my password

We'd like to **modify** a password

Duplicate some phrases and add new key terms

Sort and look for any patterns or repetition

Can you change my credentials
Can you change my password
Can you reset my password
I need to be able to change my credentials
I need to be able to change my password
I need to be able to reset my password
I want to change my credentials
I want to change my password
I want to reset my password
I'd like to change my credentials
I'd like to change my password
I'd like to reset my password

Can you change my logon credentials
Change my password
Please reset my password
I need to be able to change my credentials
I wanna to change my password
I need to be able to reset my password
We want to change the credentials
How do I change my password
I want to reset my password
How would you change my credentials
I'd like to change my password
We'd like to reset a password

Can you change my logon credentials
Change my password
Please reset my password
I need to be able to change my credentials
I wanna to change my password
I need to be able to reset my password
We want to change the credentials
How do I change my password
I want to reset my password
How would you change my credentials
I'd like to change my password
We'd like to reset a password
How do I **update** my password
I want to **update** my password
How would you **update** my credentials
I'd like to **alter** my password
We'd like to **modify** a password

Can you change my logon credentials
Change my password
How do I change my password
How do I update my password
How would you change my credentials
How would you update my credentials
I need to be able to change my credentials
I need to be able to reset my password
I wanna to change my password
I want to reset my password
I want to update my password
I'd like to alter my password
I'd like to change my password
Please reset my password
We want to change the credentials
We'd like to modify a password
We'd like to reset a password

Now repeat for your other seed phrases

Or do you?

I want to reset my password

I can't log into email

Password on my account needs to be changed

I forgot my password

Someone has access to my email

My email password was exposed on the internet

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Why not bring the best of both approaches together?

Mixed

Manual generation

- Start your project with this approach
- It will fast track development as it removes any bottleneck in utterance generation
- Fast track development with manual generation
- Can be merged into a production set later in the project

Crowd sourcing

- Create the paraphrasing jobs at the beginning of the project
- Once the jobs are completed and the utterances validate, add 80% of them to the intents. Keep 20% for testing
- Before production mix both data sets (crowd sourcing and manual)

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