

# Pizza Rasa - Chatbot en français 🇫🇷

## Présentation

Ce projet est un chatbot Rasa fonctionnel, capable de comprendre et répondre en français pour une pizzeria fictive.

## Livrable Partie 1 : Capture d'écran montrant Rasa fonctionnel + fichiers de configuration

- Le bot comprend le français et répond en français grâce à l'intégration de spaCy et du modèle `fr_core_news_md`.
- Exemple de dialogue :

```
(venv) gio@LAPTOP-J78L88U8:~/chatBot/rendu$ rasa shell
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/rasa/core/tracker_store.py:1044: MovedIn20Warning: Deprecated API features detected! These feature(s) are not compatible with SQLAlchemy 2.0. To prevent incompatible upgrades prior to updating applications, ensure requirements files are pinned to "sqlalchemy<2.0". Set environment variable SQLALCHEMY_WARN_20=1 to show all deprecation warnings. Set environment variable SQLALCHEMY_SILENCE_UBER_WARNING=1 to silence this message. (Background on SQLAlchemy 2.0 at: https://sqlalche.me/e/b8d9)
Base: DeclarativeMeta = declarative_base()
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/rasa/shared/utils/validation.py:134: DeprecationWarning: pkg_resources is deprecated as an API. See https://setuptools.pypa.io/en/latest/pkg_resources.html
import pkg_resources
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/pkg_resources/_init_.py:3117: DeprecationWarning: Deprecated call to 'pkg_resources.declare_namespace('mpl_toolkits')'. Implementing implicit namespace packages (as specified in PEP 420) is preferred to 'pkg_resources.declare_namespace'. See https://setuptools.pypa.io/en/latest/references/keywords.html#keyword-namespace-package
s
declare_namespace(pkg)
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/pkg_resources/_init_.py:3117: DeprecationWarning: Deprecated call to 'pkg_resources.declare_namespace('ruamel')'. Implementing implicit namespace packages (as specified in PEP 420) is preferred to 'pkg_resources.declare_namespace'. See https://setuptools.pypa.io/en/latest/references/keywords.html#keyword-namespace-package
s
declare_namespace(pkg)
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/tensorflow/lite/python/util.py:52: DeprecationWarning: jax.xla_computation is deprecated. Please use the AOT APIs.
from jax import xla_computation as _xla_computation
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/sanic_cors/extension.py:39: DeprecationWarning: distutils Version classes are deprecated. Use packaging.version instead.
SANIC_VERSION = LooseVersion(sanic_version)
2025-07-03 15:48:04 INFO root - Connecting to channel 'cmdline' which was specified by the '--connector' argument. Any other channels will be ignored. To connect to all given channels, omit the '--connect
or' argument.
2025-07-03 15:48:04 INFO root - Starting Rasa server on http://0.0.0.0:5005
2025-07-03 15:48:05 INFO rasa.core.processor - Loading model models/20250703-154446-cold-eel.tar.gz...
2025-07-03 15:48:05 INFO rasa.nlu.utils.spacy_utils - Trying to load SpaCy model with name 'fr_core_news_md'
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/typer/completion.py:122: DeprecationWarning: 'BaseCommand' is deprecated and will be removed in Click 9.0. Use 'Command' instead.
cli: click.BaseCommand
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/spacy/cli/_util.py:11: DeprecationWarning: Importing 'parser.split_arg_string' is deprecated, it will only be available in 'shell_completion' in C
lick 9.0.
from click.parser import split_arg_string
2025-07-03 15:48:13 INFO rasa.nlu.utils.spacy_utils - Trying to load SpaCy model with name 'fr_core_news_md'.
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/rasa/utils/train_utils.py:530: UserWarning: constrain_similarities is set to 'False'. It is recommended to set it to 'True' when using cross-entrop
y loss.
rasa.shared.utils.io.raise_warning(
2025-07-03 15:48:43 WARNING rasa.shared.utils.common - The Unexpected Intent Policy is currently experimental and might change or be removed in the future 🚧 Please share your feedback on it in the forum (ht
tps://forum.rasa.com) to help us make this feature ready for production.
2025-07-03 15:48:55 INFO root - Rasa server is up and running.
Bot loaded. Type a message and press enter (use '/stop' to exit):
Your input ->slt
Hey! How are you?
Your input ->salut
Great, carry on!
Your input ->|
```

- Si la librairie spaCy FR n'est pas installée, Rasa affiche une erreur (voir ci-dessous) :

```
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/rasa/core/tracker_store.py:1044: MovedIn20Warning: Deprecated API features detected! These feature(s) are not compatible with SQLAlchemy 2.0. To prevent incompatible upgrades prior to updating applications, ensure requirements files are pinned to "sqlalchemy<2.0". Set environment variable SQLALCHEMY_WARN_20=1 to show all deprecation warnings. Set environment variable SQLALCHEMY_SILENCE_UBER_WARNING=1 to silence this message. (Background on SQLAlchemy 2.0 at: https://sqlalche.me/e/b8d9)
Base: DeclarativeMeta = declarative_base()
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import pkg_resources
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/pkg_resources/_init_.py:3117: DeprecationWarning: Deprecated call to 'pkg_resources.declare_namespace('mpl_toolkits')'. Implementing implicit namespace packages (as specified in PEP 420) is preferred to 'pkg_resources.declare_namespace'. See https://setuptools.pypa.io/en/latest/references/keywords.html#keyword-namespace-package
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/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/pkg_resources/_init_.py:3117: DeprecationWarning: Deprecated call to 'pkg_resources.declare_namespace('ruamel')'. Implementing implicit namespace packages (as specified in PEP 420) is preferred to 'pkg_resources.declare_namespace'. See https://setuptools.pypa.io/en/latest/references/keywords.html#keyword-namespace-package
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declare_namespace(pkg)
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/tensorflow/lite/python/util.py:52: DeprecationWarning: jax.xla_computation is deprecated. Please use the AOT APIs.
from jax import xla_computation as _xla_computation
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/sanic_cors/extension.py:39: DeprecationWarning: distutils Version classes are deprecated. Use packaging.version instead.
SANIC_VERSION = LooseVersion(sanic_version)
2025-07-03 15:38:23 INFO root - Connecting to channel 'cmdline' which was specified by the '--connector' argument. Any other channels will be ignored. To connect to all given channels, omit the '--connect
or' argument.
2025-07-03 15:38:23 INFO root - Starting Rasa server on http://0.0.0.0:5005
2025-07-03 15:38:24 INFO rasa.core.processor - Loading model models/20250703-153653-fundamental-dill.tar.gz...
/home/gio/.pyenv/versions/3.10.12/lib/python3.10/site-packages/rasa/utils/train_utils.py:530: UserWarning: constrain_similarities is set to 'False'. It is recommended to set it to 'True' when using cross-entrop
y loss.
rasa.shared.utils.io.raise_warning(
2025-07-03 15:39:03 WARNING rasa.shared.utils.common - The Unexpected Intent Policy is currently experimental and might change or be removed in the future 🚧 Please share your feedback on it in the forum (ht
tps://forum.rasa.com) to help us make this feature ready for production.
2025-07-03 15:39:22 INFO root - Rasa server is up and running.
Bot loaded. Type a message and press enter (use '/stop' to exit):
Your input ->yo
Great, carry on!
Your input ->salut
Here is something to cheer you up:
Image: https://i.imgur.com/nGF1K8f.jpg
Did that help you?
Your input ->
```

## Livrable Partie 2 : Bot Rasa fonctionnel avec test de 5 dialogues différents

- Exemple de dialogues de test :

```
Bot loaded. Type a message and press enter (use '/stop' to exit):
Your input -> salut
Bonjour ! Bienvenue chez Pizza Rasa. Comment puis-je vous aider ?
Your input -> carte
Voici notre menu :
🍕 Margherita - 12€
🍕 Regina - 14€
🍕 Calzone - 16€
🍕 Quatre Saisons - 15€
Que souhaitez-vous commander ?
Your input -> regina
La pizza Margherita coûte 12€.
Your input -> calzone
La pizza Margherita coûte 12€.
Your input -> demander_horaires
Nous sommes ouverts du mardi au dimanche de 18h à 23h. Fermé le lundi.
Your input -> horaires d'ouverture
Nous sommes ouverts du mardi au dimanche de 18h à 23h. Fermé le lundi.
Your input -> prix de la calzone
La pizza Margherita coûte 12€.
Your input -> prix de la calzone *3
La pizza Margherita coûte 12€.
Your input -> à bientôt
Au revoir ! Merci de votre visite chez Pizza Rasa !
Your input -> |
```

## Livrables finaux

- Projet Rasa complet et fonctionnel (code, configuration, données d'entraînement)
- Documentation technique (ce README)
- 5 captures d'écran de dialogues de test
- Rapport de 2 pages sur les difficultés rencontrées et solutions apportées

## Installation rapide

```
# Installer les dépendances système nécessaires (Debian/Ubuntu)
sudo apt-get update && sudo apt-get install -y libffi-dev libssl-dev
zlib1g-dev libbz2-dev libreadline-dev libsqlite3-dev build-essential
liblzma-dev tk-dev

# Installer les dépendances Python
pip install -r requirements.txt

# Télécharger le modèle spaCy français
python -m spacy download fr_core_news_md
```

## Lancement du bot

```
rasa train  
rasa shell
```

## Difficultés rencontrées et solutions

- Problème de compatibilité Python/Rasa : Rasa 3.x nécessite Python  $\leq$  3.10. Solution : installation via pyenv.
- Problème de support du français : ajout de spaCy et du modèle `fr_core_news_md`.
- Problèmes de validation YAML : correction des slots, intents et structure des fichiers.
- Traduction complète des réponses et intents pour une expérience utilisateur 100% française.
- Il a été nécessaire de réaliser les parties 2 et 3 en parallèle pour garantir le bon fonctionnement du projet.