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# Rasa Chatbot Builder training

3 days (21 hours)

## Presentation

Rasa Chatbot Builder is a powerful open-source solution for designing, training and deploying customized chatbots adapted to Data use cases.

Thanks to its modular architecture, Rasa enables you to integrate NLP, flexible conversational workflows and link your assistants to your company's Data ecosystem.

Our training will enable you to install, train, deploy and supervise a chatbot from the creation of the first project to integration with your Data pipelines, while mastering the challenges of performance and interaction quality.

At the end of the course, you'll be able to customize conversational assistants to meet specific Data needs, orchestrate complex interactions, and improve performance through continuous supervision.

As with all our training courses, this one will introduce you to the latest stable version of [Rasa v3.6.21](#), with a practical approach geared to the concrete needs of Data teams.

## Objectives

- Master the Rasa framework for Data projects
- Train, configure and deploy a Data-ready chatbot
- Integrate Rasa into the Data ecosystem (APIs, scripts, dashboards)
- Supervise and optimize the performance of your assistants

## Target audience

- Data scientists

- Data analysts
- Data engineers

## Prerequisites

- Basic knowledge of Python and data manipulation
- Experience with Data projects

## Rasa Chatbot Builder program

### Discover Rasa's architecture and the fundamentals of conversational AI

- Introduction to the Rasa framework and key components
- Understanding the Rasa Open Source ecosystem and Rasa Pro
- Principles of Natural Language Processing (NLP) applied to Rasa
- Positioning Rasa in a Data and Machine Learning architecture
- Data use cases: collection automation, workflow management, technical Q&A
- Workshop: Rasa installation, exploration of project structure, initial discussions

### Configuring and customizing the NLU for Data datasets

- NLU pipeline structure: components, configuration, tuning
- Managing intents, entities and synonyms for Data Science
- Creating and importing Data-specific training corpora
- Strategies for annotating and continuously improving training data
- Introduction to NLU testing and evaluation
- Workshop: NLU annotation, training and testing on a Data business use-case

### Modeling conversations and managing complex stories

- Notion of stories and conversational rules
- Managing conditional and multi-turn dialogues
- Using slots and forms to collect structured information
- Enriching the user experience with personalized responses
- Examples of conversational Data flows: diagnosis, extraction, automation
- Workshop: Creating advanced stories and testing conversations in real-life conditions

### Configuring the action server and automating business responses

- Introduction to action server: custom Python scripts
- Connection to internal Data databases or APIs
- Webhook management, integration with dashboards, notebooks or ML services

- Example of Data business automation via custom actions
- Unit testing and action monitoring

## Integrating Rasa into the Data ecosystem and analytical tools

- Deployment on server, VM or via Docker
- Connection with Data tools: Jupyter, Airflow, BI tools
- Authentication, security and access management
- Log tracking and conversation auditing
- Bot lifecycle management

## Deploy chatbot and orchestrate supervision in production

- Automate deployment with scripts, CI/CD, cloud
- Monitoring: metrics, alerts, log analysis
- Error management and fallback strategy
- Continuous improvement plan based on user feedback analysis
- Monitoring checklist for Data/DevOps environments
- Workshop: Deployment of a complete chatbot, supervision and troubleshooting

## Optimizing the NLU and the quality of Data conversations

- Strategies for improving the NLU pipeline: tuning, pre-trained models
- Using user feedback to re-train the bot
- Versioning, rollback and model history management
- Performance measurement: precision, recall, confusion matrix
- Case study: solving comprehension problems with data

## Industrializing and documenting the Data chatbot project

- Structuring technical and functional documentation
- Define appropriate Data/IA project governance
- Automate testing, validation and packaging
- Prepare for continuous integration (CI) and continuous delivery (CD)
- Disseminate Data security, quality and compliance best practices

## Scalability, multi-bot management and future innovations

- Orchestration of multiple bots: complex Data use-cases
- Managing multiple languages, channels and Data tenants
- Integration perspectives: generative AI, LLMs, custom models
- Benchmark and feedback on large-scale Data deployments
- Action plan for the future, Rasa and Data technology watch
- Workshop: Scenario for multi-bot deployment or advanced integration

## Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced IT technology, or to acquire specific business knowledge or modern methods.

## Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

## Teaching methods

Practical training: 60% hands-on, 40% theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Certification

A certificate will be awarded to each trainee who has completed the entire course.