

Course : Chatbot, creating and deploying a conversational agent in JavaScript

Practical course - 3d - 21h00 - Ref. BQW

Price : 2360 CHF E.T.



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Chatbots, conversational agents capable of dialoguing with a user, are emerging as a new interface in their own right. In this course, you'll learn how to develop chatbots in JavaScript using the Node.js runtime. You'll integrate your developments with various APIs and dedicated authoring solutions.



Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Implementing a chatbot with Node.js.
- ✓ Structuring a conversation flow
- ✓ Training a natural language processing (NLP) engine for natural language recognition
- ✓ Connecting a chatbot to an instant messenger

Intended audience

Developers, architects, project managers.

Prerequisites

Knowledge of JavaScript and Node.js.

Course schedule

1 Chatbots: design and uses

- Chatbots: which types for which uses?
- Natural Language Processing (NLP) and machine learning.
- Bot frameworks versus bot platforms.

PARTICIPANTS

Developers, architects, project managers.

PREREQUISITES

Knowledge of JavaScript and Node.js.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

2 Node.js reminders

- Reminders JavaScript ES/2015.
- The modular approach of Node.js.
- Event management, route management, data persistence.
- Packages useful for chatbot development.

Hands-on work

Installation of the development environment. Install and configure a Node.js server.

3 Chatbot architecture

- The various components: connectors, adapters, NLP modules, actions...
- I/O targets: messaging platforms, public APIs...
- Logical architecture: Messenger, Classifier, Analyzer, Responder, Selector.
- Define intentions, responses and entities.
- Configure connectors for external PLCs.

Hands-on work

Creation and testing of a first chatbot.

4 Conversational flow design

- Identify potential users and analyze their needs.
- Implement a scenario to meet a business need.
- Definition of simple and complex conversations.
- Model the decision tree and manage deadlocks.
- Personalize answers.

Hands-on work

Conceptualizing a conversation flow.

5 Natural Language Processing (NLP)

- The democratization of artificial intelligence.
- NLU and NLP, principles of natural language understanding systems.
- Intentions, utterances and entities.
- Define a personality and character for your chatbot.
- Natural language engines: Dialogflow, Wit.ai, LUIS.ai, Lex, Recast.ai...
- Training and developing your chatbot.
- Machine learning frameworks (TensorFlow.js).

Hands-on work

Training an NLP engine for natural language recognition.

6 Information system deployment and integration

- Hosting solutions for chatbot publication.
- Connect to an instant messaging service (Slack, Facebook Messenger, Teams...).
- Links with other IS applications.

Hands-on work

Connect your chatbot to an instant messenger.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

7 Enriching the chatbot

- Context and memory management.
- Data persistence, contexts, conversations "logs".
- Platforms and tools for statistics, key performance indicators (KPIs).

Hands-on work

Add new features to an existing chatbot.