CORSEN AI Academy

Voice Agent API: real-time conversations

Course syllabus

Version 2026-11

Overview

Build voice agents over WebSocket: VAD, voice function calling, events, and SIP phone integration.

Learning objectives

- Open a real-time WebSocket session authenticated with ephemeral tokens and configured through session.update
- Process PCM and G.711 audio streams while managing automatic speech detection
- Handle the client-to-server and server-to-client event cycle of a conversation
- Trigger voice function calling and built-in tools during a live exchange
- Connect a voice agent to telephony through SIP and LiveKit, and convert audio in Python

Audience and prerequisites

Developers, engineers, and integrators who want to use Grok through the API in their applications.

Able to read Python or JavaScript and JSON, plus basic command-line skills. An API key from the xAI console to try the examples.

Duration and format

Estimated duration : 1 h. 100% online and self-paced, available 24/7 from any browser. Your progress is saved, so you can pick up where you left off at any time. Estimated time: 1 h.

Content

- WebSocket (4 lessons)
- Audio (4 lessons)
- Events (4 lessons)
- Advanced (4 lessons)

Assessment

Self-assessment with the key takeaways at the end of each lesson, and hands-on practice applying the examples to your own use cases. A final quiz of 5 questions with answers, at the end of the last lesson, lets you check what you've learned.

Accessibility

This course is designed to be accessible to people with disabilities: text content compatible with screen readers, keyboard navigation, and compliant color contrast. For any accommodation request, email hello@corsen.ai.

Price and recognition

Free

Certificate of completion issued by Corsen AI.

Access time

Immediate after account creation and email confirmation.

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