ChatGPT

# Angular Voice Recognition Examples

- **Luis Aviles' "Web-Speech-Angular" app** – An open-source **Angular** (v10) demo using the browser's Web Speech API for voice control [1]. It implements speech recognition (and synthesis) in a full Angular Material UI. The project has a live demo and blog tutorial [1]. It uses the Web Speech API (Chrome) to capture voice commands and speaks back responses. By default it supports English/Spanish (and can be extended via its i18n strategy) [2]. This is a complete voice-driven web app, not just a tiny demo. It was built with Angular 10/CLI (strict mode) [3], so it can be upgraded to newer Angular versions if needed.
- **Voice-Controlled Chat App (2024 tutorial)** – A recent Dev.to walkthrough shows how to build an Angular chat UI that listens to speech via `webkitSpeechRecognition` [4]. It includes full source code for a `VoiceRecognitionService` (in TypeScript) and a chat component. The example uses the browser Web Speech API (Chrome) to turn spoken words into chat messages. It's a complete Angular CLI app (new project) using Web Speech, and the code explicitly shows setting `recognition.lang = 'en-US'` [4]. This demonstrates how to integrate voice dictation into any Angular form. The speech engine is browser-based (Chrome-only Web Speech API). In principle the language could be changed (the code is easily modified for other locales).
- **"Speech Detection" Angular Demo (Angular 15)** – An Angular 15 standalone-component example (from Railsstudent's JS30 series) that continuously listens and displays recognized phrases. It uses RxJS and the Web Speech API under the hood. The blog post provides helper functions to start `SpeechRecognition`, handle interim results, and emit a stream of final transcripts [5] [6]. The code declares `new webkitSpeechRecognition()` with `recognition.lang = 'en-US'` [5]. A GitHub repo and live demo are linked at the end of the post [7], showing the full Angular 15 project. This is a minimal app demo, suitable as a learning example. (It's easily upgradeable to Angular 16 or beyond.)

## Angular Voice Libraries / Components

- **voicecapture-angular** – An open-source Angular component library (2023) for voice input [8]. It provides a `<voicecapture-angular>` component that shows a mic button and captures speech. The library wraps the Web Speech API (Chrome) and returns transcripts. It's designed for modern Angular (uses Signals in Angular 16+) and comes with a live demo site. Its README highlights that it offers "seamless voice capture and transcription" via a simple API [8]. The component accepts a `lang` input (default `"en"`) so you can specify other locales (example usage shows `"pt"` for Portuguese) [9]. This makes it easy to add voice control in any Angular 16+ app.
- **@ng-web-apis/speech** – Part of the ng-web-apis collection, this library exposes the Web Speech API in Angular-friendly form [10]. It provides a `SpeechRecognitionService` (RxJS Observable) and directives/pipes for speech synthesis and recognition. For example, you can inject `SpeechRecognitionService` and call `listen()` to get an observable of results. The README notes it works in supporting browsers (effectively Chrome only) [10]. It supports configuration like language and interim results. This is an Angular library (archived, now in the monorepo) rather than a full app, but it powers demos like Taiga UI's "Say 'Ok, Angular'" demo [10]. It's compatible with Angular 9+ (older) but could be used in newer apps.

- **ngx-voiceinput (voice-listener)** – An Angular 4+ component plugin for voice input [11]. You install `@ngxvoice/ngx-voicelistner` and add `<voice-listner-input>` in your template. It wraps Chrome's Web Speech API: by default it listens for English (default locale `en-IN`), and you can set `[lang]="'en-US'"` or any IETF code to support other languages [12]. The GitHub (starred only twice) includes a demo site (linked in README) and example usage showing an event `(onListeningVoice)` that emits the final transcript [13] [12]. This is essentially a simple voice-input field, not a full app, but shows integration: it works on modern browsers (Chrome on desktop/mobile). (Because it targets Angular ≥4, it will also work in later versions with minimal changes.)
- **ngx-speech-recognition** – A (now-unmaintained) Angular 5+ service library. It provides an `RxSpeechRecognitionService` and associated tokens to configure language/grammar [14]. For example, a demo component shows injecting `RxSpeechRecognitionService` and calling `listen().pipe(resultList).subscribe(...)` to get transcripts [14]. Its setup allows you to specify `lang: 'en-US'`, `interimResults: true`, etc [15]. This library is built on Chrome's Web Speech API, so it shares its browser limitations, but gives an RxJS-style wrapper. The demo server (Angular CLI) auto-reloads on changes. While it hasn't been updated recently, the code can still be referenced or adapted for newer Angular projects.

## Cloud/SDK Voice Assistants

- **Picovoice Porcupine/Rhino (Angular Wake-Word Demo)** – Picovoice publishes tutorials and sample code for Angular. One example (Medium 2021) shows an Angular app using Porcupine for wake-word detection ("OK Google" or "Alexa") and then handing off to Chrome's SpeechRecognition for transcription [16] [17]. The article links to a GitHub demo (`porcupine/demo/angular-stt`) [17]. In this setup, Porcupine (WASM) continuously listens for a trigger word; when heard, the app calls `webkitSpeechRecognition`. Thus the engine mix is Porcupine (offline wake word) + Google's Cloud ASR (via browser). Multiple built-in wake words are supported (English examples "Alexa", "OK Google", etc) [18]. The result is a hands-free voice interface demo (starter Angular CLI project). Picovoice's code is up-to-date and can be integrated into Angular 13+.
- **Alan AI (Angular Agentic Interface)** – Alan.ai provides a free-tier voice assistant SDK. Their docs show adding an "Alan" voice button to any Angular app [19]. After installing `@alan-ai/alan-sdk-web`, you import and initialize `alanBtn` in `app.component`. Alan's cloud ASR and NLU handle speech-to-text and intent. The tutorial promises "industry's best ASR, SLU, Speech Synthesis" [19]. For example, you can define voice commands in Alan Studio and handle them in your Angular app. Alan supports many languages via its platform. While not open-source, it has an SDK that works with modern Angular. (It effectively turns your Angular frontend into a voice-enabled interface.)
- **Picovoice Voice Widget (Timer App)** – A 2023 Picovoice blog ("Alexa, set a timer..." series) includes an Angular-based "VoiceWidget" component demo [20]. This example uses Picovoice's wake-word (Porcupine) and Rhino (speech-to-intent) running locally in-browser (via WebAssembly). The demo shows a countdown timer app: you speak "set a timer for 1 minute" and the app recognizes intent/slots in JSON [21]. It requires an Angular 11 project and a Picovoice AccessKey, but it's effectively offline (the recognition happens in the browser, no external ASR). Picovoice supports multiple languages by training models in their console. This example is a simple demo (with code on GitHub via Picovoice) showing a practical voice-command integration.

**Compatibility:** Most of these examples use standard browser APIs or JS SDKs, so they *can* run on mobile browsers too. Chrome on Android fully supports the Web Speech API, so demos like web-speech-angular or voice-listener will work there; Safari on iOS does **not** support Web Speech, so those need Chrome or a

WebView. The Picovoice WASM solutions (Porcupine/Rhino) are browser-based and work on iOS/Android. Cloud services like Alan use pure JS and work on any modern browser (mobile or desktop). All code snippets above run in Angular's frontend; none rely on old AngularJS. Some libraries were originally for Angular 4–10, but can be updated (or just used in recent Angular). For instance, *voicecapture-angular* is built for Angular 16 (signals) [8], the Railsstudent demo uses Angular 15, and others (web-speech-angular, voice-listener) can run on Angular 12+ with minimal change.

**References:** Each project above is documented on GitHub or a tutorial site [1] [8] [19] [20] [4] [7]. These links show the code, demos, and instructions for integrating voice recognition in Angular apps. They cover both full applications and small component demos, use online/browser speech engines, and support multiple languages via configuration.

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[1] GitHub - luixaviles/web-speech-angular: A Web Application that implements Speech Recognition and Speech Synthesis using Web APIs, Angular, TypeScript, RxJS, and Angular Material
https://github.com/luixaviles/web-speech-angular

[2] [3] Build Your First Voice-Driven Web Application · Luis Aviles
https://luixaviles.com/2020/07/build-your-first-voice-driven-web-app/

[4] Integrating Speech Recognition in an Angular Chat Application - DEV Community
https://dev.to/koolkamalkishor/integrating-speech-recognition-in-an-angular-chat-application-70p

[5] [6] [7] Fun with speech detection using RxJS and Angular standalone components - DEV Community
https://dev.to/railsstudent/fun-with-speech-detection-using-rxjs-and-angular-standalone-components-3795

[8] [9] GitHub - angular-a11y/voicecapture-angular
https://github.com/angular-a11y/voicecapture-angular

[10] GitHub - ng-web-apis/speech: A library for using Web Speech API with Angular
https://github.com/ng-web-apis/speech

[11] [12] [13] GitHub - nithincvpoyyil/voice-listener: An reusable angular component for voice based input using web speech API
https://github.com/nithincvpoyyil/voice-listener

[14] [15] GitHub - kamiazya/ngx-speech-recognition: Angular 5+ speech recognition service (based on browser implementation such as Chrome).
https://github.com/kamiazya/ngx-speech-recognition

[16] [17] [18] Voice-enabling an Angular App with Wake Words | by David Bartle | Picovoice | Medium
https://medium.com/picovoice/voice-enabling-an-angular-app-with-wake-words-dae4c9f26f9f

[19] Building a voice Agentic Interface for an Angular app | Alan Docs
https://alan.app/docs/tutorials/web/integrating-angular-app/

[20] [21] Day 16: Alexa, set a timer for one minute | Voice Controlled Timer with Angular - DEV Community
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