

AI SDK by Vercel

Foundations

Overview

Providers and Models

Prompts

Tools

Streaming

Agents

Getting Started

Navigating the Library

Next.js App Router

Next.js Pages Router

Svelte

Vue.js (Nuxt)

Node.js

Expo

AI SDK Core

Overview

Generating Text

Generating Structured Data

Tool Calling

Prompt Engineering

Settings

Embeddings

Image Generation

Transcription

Speech

Language Model Middleware

Provider & Model Management

Error Handling

Testing

Telemetry

AI SDK UI

Overview

Chatbot

Chatbot Message Persistence

Chatbot Tool Usage

Generative User Interfaces

Completion

Object Generation

Streaming Custom Data

Error Handling

Transport

Reading UI Message Streams

Message Metadata

Stream Protocols

AI SDK RSC

Advanced

Reference

AI SDK Core

AI SDK UI

AI SDK RSC

Stream Helpers

AI SDK Errors

Migration Guides

Troubleshooting

AI SDK

The AI SDK is the TypeScript toolkit designed to help developers build AI-powered applications and agents with React, Next.js, Vue, Svelte, Node.js, and more.

Why use the AI SDK?

Integrating large language models (LLMs) into applications is complicated and heavily dependent on the specific model provider you use.

The AI SDK standardizes integrating artificial intelligence (AI) models across supported providers. This enables developers to focus on building great AI applications, not waste time on technical details.

For example, here's how you can generate text with various models using the AI SDK:

🗨️ xAI

🗨️ OpenAI

🗨️ Anthropic

🗨️ Google

🗨️ Custom

```
import { generateText } from "ai"
import { openai } from "@ai-sdk/openai"

const { text } = await generateText({
  model: openai("gpt-4o-mini"),
  prompt: "What is love?"
})
```

Love is a complex and multifaceted emotion that can be felt and expressed in many different ways. It involves deep affection, care, compassion, and connection towards another person or thing. Love can take on various forms such as romantic love, platonic love, familial love, or self-love.

The AI SDK has two main libraries:

AI SDK Core: A unified API for generating text, structured objects, tool calls, and building agents with LLMs.

AI SDK UI: A set of framework-agnostic hooks for quickly building chat and generative user interface.

Model Providers

The AI SDK supports multiple model providers.

xAI

🗨️ Image Input

🗨️ Image Generation

🗨️ Object Generation

🗨️ Tool Usage

🗨️ Tool Streaming

OpenAI

🗨️ Image Input

🗨️ Image Generation

🗨️ Object Generation

🗨️ Tool Usage

🗨️ Tool Streaming

Azure

🗨️ Image Input

🗨️ Object Generation

🗨️ Tool Usage

🗨️ Tool Streaming

Anthropic

🗨️ Image Input

🗨️ Object Generation

🗨️ Tool Usage

🗨️ Tool Streaming

AI

🗨️ Image Input

🗨️ Object Generation

🗨️ Tool Usage

🗨️ Tool Streaming

AWS

🗨️ Image Input

🗨️ Image Generation

🗨️ Object Generation

🗨️ Tool Usage

🗨️ Tool Streaming

Groq

🗨️ Image Input

🗨️ Object Generation

🗨️ Tool Usage

🗨️ Tool Streaming

On this page

AI SDK

Why use the AI SDK?

Model Providers

Templates

Starter Kits

Feature Exploration

Frameworks

Generative UI

Security

Join our Community

llms.txt (for Cursor, Windsurf, Copilot, Claude etc.)

Example Usage

Elevate your AI applications with Vercel.

Trusted by OpenAI, Replicate, Suno, Pinecone, and more.

Vercel provides tools and infrastructure to deploy AI apps and features at scale.

Talk to an expert

{;}Object Generation🌀Tool Usage:::Tool Streaming

PaLM



🚫Image Generation

DeepMind



📺Image Input{;}Object Generation🌀Tool Usage:::Tool Streaming

Google



📺Image Input{;}Object Generation🌀Tool Usage:::Tool Streaming

Google



📺Image Input🚫Image Generation{;}Object Generation🌀Tool Usage:::Tool Streaming

Mistral



📺Image Input{;}Object Generation🌀Tool Usage:::Tool Streaming

Together

together.ai

{;}Object Generation🌀Tool Usage:::Tool Streaming

Concero



🌀Tool Usage:::Tool Streaming

Fireworks



🚫Image Generation{;}Object Generation🌀Tool Usage:::Tool Streaming

DeepSeek



{;}Object Generation🌀Tool Usage:::Tool Streaming

Cerebras



```
{;}Object GenerationTool UsageTool Streaming
```

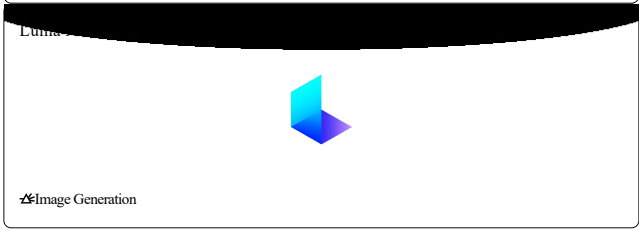
[illegible]

Image Generation

Templates

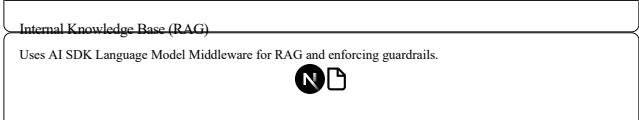
We've built some templates ⁷ that include AI SDK integrations for different use cases, providers, and frameworks. You can use these templates to get started with your AI-powered application.

Starter Kits



Uses the AI SDK and Next.js. Features persistence, multi-modal chat, and more.

 Zinnov



Multi-Modal Chat

Uses Next.js and AI SDK useChat hook for multi-modal message chat interface.

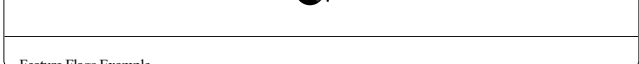


Semantic Image Search

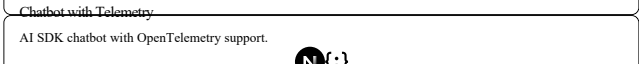
An AI semantic image search app template built with Next.js, AI SDK, and Postgres.



Feature Exploration
Query PostgreSQL using natural language with AI SDK and GPT-4o.

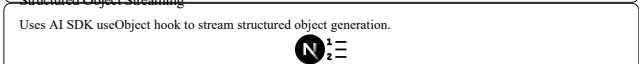


AI SDK with Next.js, Feature Flags, and Edge Config for dynamic model switching.

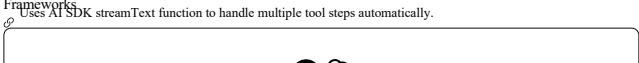
[illegible]

100

Structured Object Streaming



Multi-Step Tools



Next is OpenAI Starter








Nuxt OpenAI Starter

Uses OpenAI GPT-4, AI SDK, and Nuxt.js.



SvelteKit OpenAI Starter

Uses OpenAI GPT-4, AI SDK, and SvelteKit.


Solid OpenAI Starter
Generative UI Uses OpenAI GPT-4, AI SDK, and Solid.

Gemini Chatbot
Uses Google Gemini, AI SDK, and Next.js.

Generative UI with RSC (experimental)
Security Uses Next.js, AI SDK, and streamUI to create generative UIs with React Server Components.

Bot Protection
Uses Kasada, OpenAI GPT-4, AI SDK, and Next.js.

Rate Limiting

Join our Community
Uses Vercel KV, OpenAI GPT-4, AI SDK, and Next.js.

If you have questions about anything related to the AI SDK, you're always welcome to ask our community on GitHub Discussions [↗].

llms.txt (for Cursor, Windsurf, Copilot, Claude etc.)

You can access the entire AI SDK documentation in Markdown format at ai-sdk.dev/llms.txt. This can be used to ask any LLM (assuming it has a big enough context window) questions about the AI SDK based on the most up-to-date documentation.

Example Usage

For instance, to prompt an LLM with questions about the AI SDK:

Copy the documentation contents from ai-sdk.dev/llms.txt

Use the following prompt format:

```
1Documentation:
2(paste documentation here)
3---
4Based on the above documentation, answer the following:
5(your question)
```

Next
Foundations >

