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LangChain

LangChain↗ is a framework for developing applications powered by language models. It provides tools and abstractions for working with AI models, agents, vector stores, and other data sources for retrieval augmented generation (RAG). However, LangChain does not provide a way to easily build UIs or a standard way to stream data to the client.

Example: Completion

Here is a basic example that uses both the AI SDK and LangChain together with the Next.js↗ App Router.

The AI SDK `LangChainAdapter` uses the result from LangChain ExpressionLanguage streaming↗ to pipe text to the client. `LangChainAdapter.toDataStreamResponse()` is compatible with the LangChain Expression Language `.stream()` function response.

```ts
app/api/completion/route.ts
1  import { ChatOpenAI } from '@langchain/openai';
2  import { LangChainAdapter } from 'ai';
3
4  export const maxDuration = 60;
5
6  export async function POST(req: Request) {
```

```
7     const { prompt } = await req.json();
8
9     const model = new ChatOpenAI({
10      model: 'gpt-3.5-turbo-0125',
11      temperature: 0,
12    });
13
14    const stream = await model.stream(prompt);
15
16    return LangChainAdapter.toDataStreamResponse(stream);
17  }
```

Then, we use the AI SDK's `useCompletion` method in the page component to handle the completion:

```tsx
TS  app/page.tsx

1   'use client';
2
3   import { useCompletion } from 'ai/react';
4
5   export default function Chat() {
6     const { completion, input, handleInputChange, handleSubmit } =
7       useCompletion();
8
9     return (
10      <div>
11        {completion}
12        <form onSubmit={handleSubmit}>
13          <input value={input} onChange={handleInputChange} />
14        </form>
15      </div>
16    );
17  }
```

More Examples

You can find additional examples in the AI SDK examples/next-langchain ↗ folder.

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