



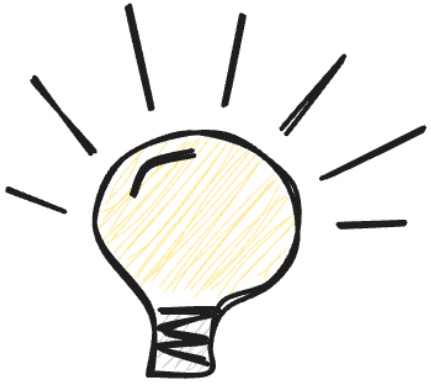
Generative AI with JavaScript

Speed up your AI development with LangChain.js

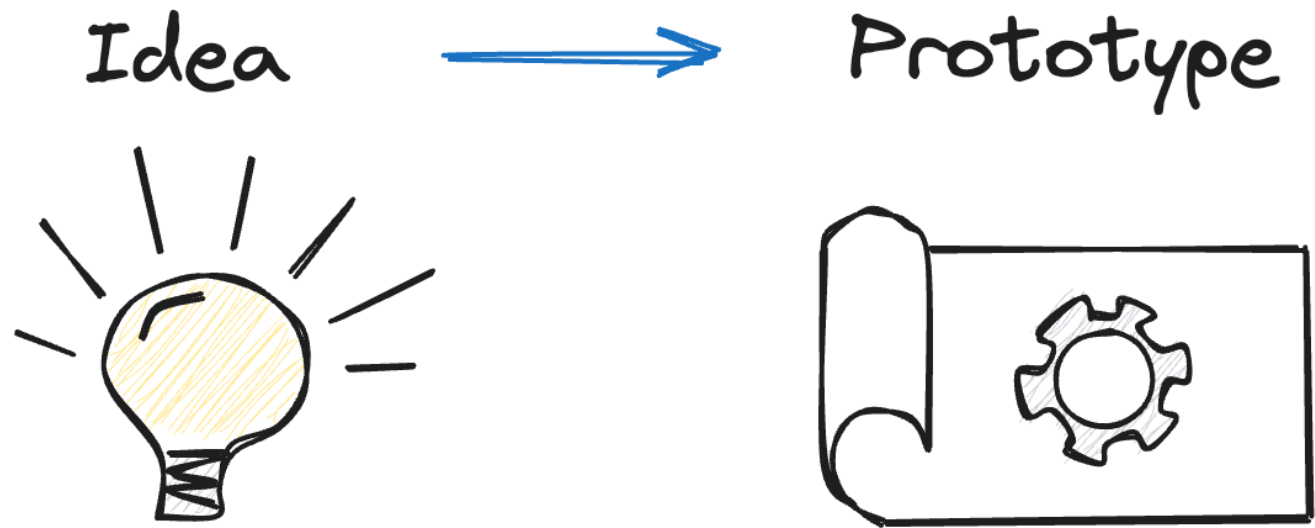
Developing AI applications

Developing AI applications

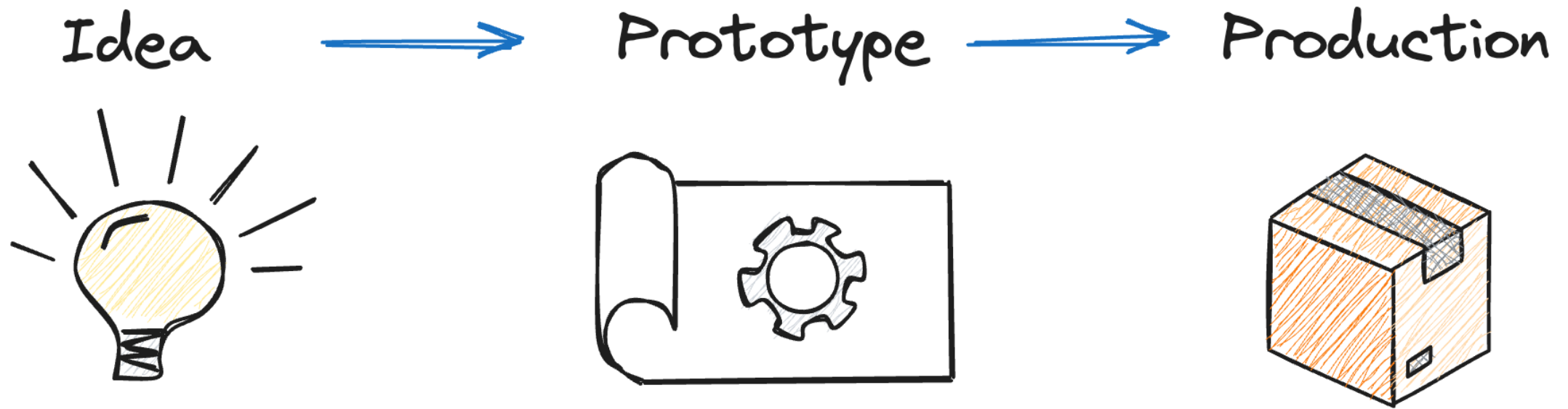
Idea



Developing AI applications



Developing AI applications



LangChain.js

<https://js.langchain.com>

LangChain.js



Open-source JavaScript library for working with LLMs



Provides high-level abstractions models, vector databases, agents...



Bridge between local and cloud-based components



Allows complex compositions of models and data

Core concepts

Prompt templates

Inject user input, parameters and context into prompts

main.js

```
const promptTemplate = ChatPromptTemplate.fromMessages([  
  ["system", "You are a helpful assistant"],  
  ["user", "Tell me a joke about {topic}"],  
]);  
  
await promptTemplate.invoke({ topic: "cats" });
```

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```

Runnable and chains

Compose processing sequences

main.js

```
type Joke = { joke: string };

const model = new ChatOpenAI({ model: "gpt-4o-mini" });
const prompt = ChatPromptTemplate.fromTemplate(
    "Tell a joke about {topic}. Answer with valid JSON, containing one field: 'joke'");
const parser = new JsonOutputParser<Joke>();

const chain = prompt
    .pipe(model)
    .pipe(parser);

await chain.invoke({ topic: "bears" });
```

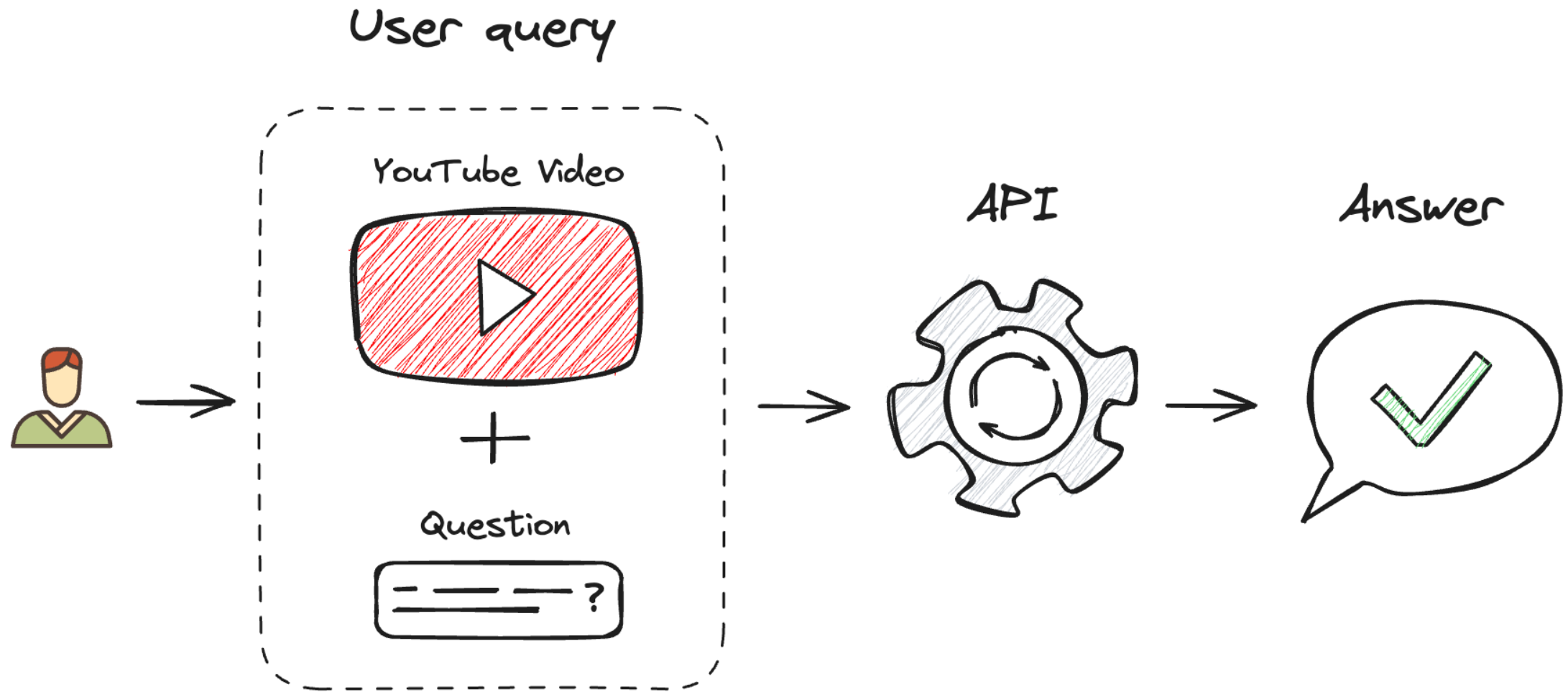
Components overview

Component	Usage
Chat models	AI chat completions
Embedding models	Transform text into vectors
Document loaders	Load text from various document formats
Document transformers	Process documents (chunking, tagging...)
Vector stores	Store documents and perform vector search
Store	Store chat history
Retrievers	Get documents

Ask YouTube API

Demo

Ask YouTube API



Resources

- LangChain.js docs js.langchain.com
- Ask YouTube API demo aka.ms/ai/js/ask-yt
- AI chat with RAG workshop aka.ms/ws/openai-rag-qdrant

