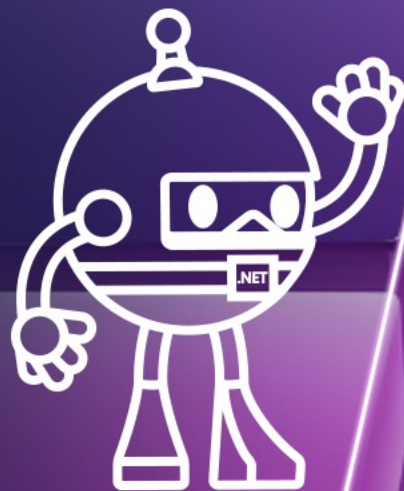


.NET Conf China 2023

2023/12/16
09:30 - 18:00

中国 · 北京





.NET中文社区

中国 · 北京

.NET Conf China 2023

BotSharp开源应用框架

——连接LLMs到您的.NET应用

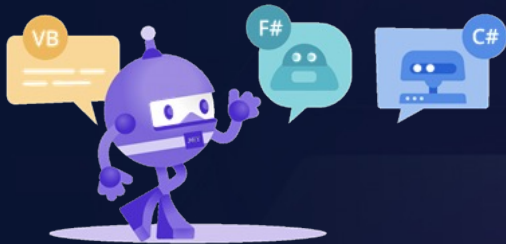
仇华





SciSharp STACK

A .NET based Open Source Ecosystem for Data Science, Machine Learning and AI.





NLP Support

BotSharp

LLamaSharp



.NET ML Framework

TensorFlow.NET

SciSharp.Models

Torch.NET



Computation SDKs

NumSharp

Pandas.NET

Bigtree.Algorithm



Supporting Tools

SharpCV

Keras.NET

Plot.NET



TensorFlow.NET Public

.NET Standard bindings for Google's TensorFlow for developing, training and deploying Machine Learning models in C# and F#.

● C# ☆ 3k 🍷 493

NumSharp Public

High Performance Computation for N-D Tensors in .NET, similar API to NumPy.

● C# ☆ 1.3k 🍷 180

Pandas.NET Public

Pandas port for C# and F#, data analysis tool, process multi-dim array in DataFrame.

● C# ☆ 494 🍷 72

BotSharp Public

The AI Agent Application Framework in .NET

● SCSS ☆ 1.6k 🍷 363

LLamaSharp Public

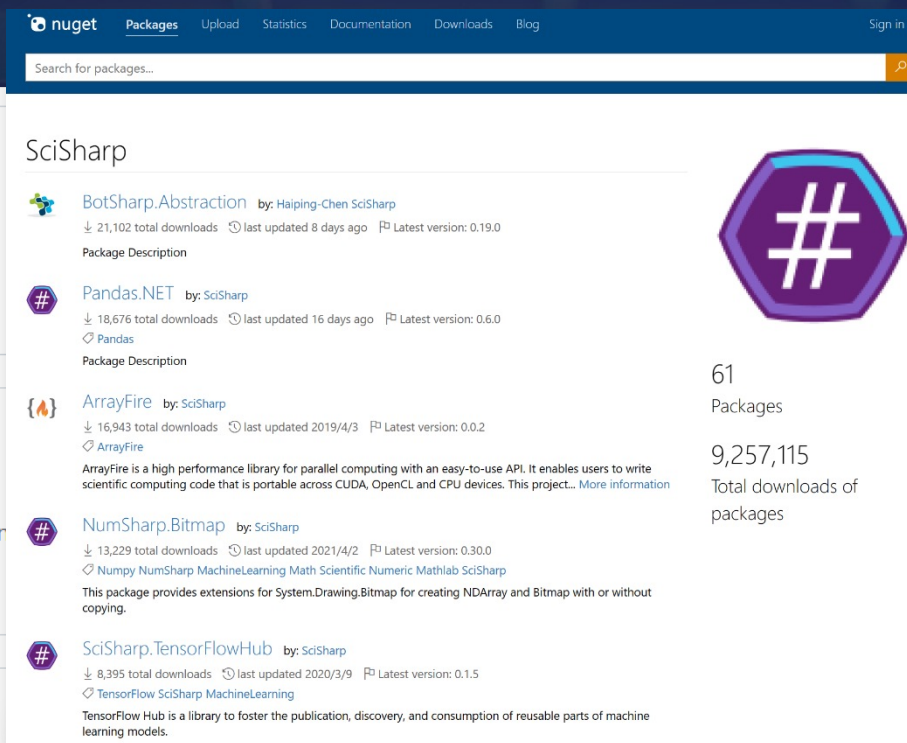
Run LLaMA/GPT model easily and fast in C#! 🤖
LLamaSharp with semantic-kernel, unity, WPF and more.

● C# ☆ 992 🍷 133

SharpCV Public

A Computer Vision library for C# and F# that combines OpenCV and NDAarray together in .NET Standard.

● C# ☆ 279 🍷 49



The image shows a screenshot of the NuGet Packages page for SciSharp. The page header includes the NuGet logo and navigation links: Packages, Upload, Statistics, Documentation, Downloads, and Blog. A search bar is present with the text "Search for packages...". The main content area lists several packages under the SciSharp umbrella:

- BotSharp.Abstraction** by: Haiping-Chen SciSharp
↓ 21,102 total downloads · last updated 8 days ago · Latest version: 0.19.0
Package Description
- Pandas.NET** by: SciSharp
↓ 18,676 total downloads · last updated 16 days ago · Latest version: 0.6.0
Pandas
Package Description
- ArrayFire** by: SciSharp
↓ 16,943 total downloads · last updated 2019/4/3 · Latest version: 0.0.2
ArrayFire
ArrayFire is a high performance library for parallel computing with an easy-to-use API. It enables users to write scientific computing code that is portable across CUDA, OpenCL and CPU devices. This project... More information
- NumSharp.Bitmap** by: SciSharp
↓ 13,229 total downloads · last updated 2021/4/2 · Latest version: 0.30.0
Numpy NumSharp MachineLearning Math Scientific Numeric Mathlab SciSharp
This package provides extensions for System.Drawing.Bitmap for creating NDAarray and Bitmap with or without copying.
- SciSharp.TensorFlowHub** by: SciSharp
↓ 8,395 total downloads · last updated 2020/3/9 · Latest version: 0.1.5
TensorFlow SciSharp MachineLearning
TensorFlow Hub is a library to foster the publication, discovery, and consumption of reusable parts of machine learning models.

On the right side of the package list, there is a large purple hexagonal logo with a white hash symbol (#). Below the logo, the statistics are displayed: 61 Packages, 9,257,115 Total downloads of packages.





2016



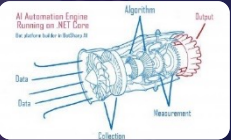
微软提出CAAP构想



2018



BotSharp 创建
NLP base, Slot Filling



2022



BotSharp重构
LLM base



2023.12



BotSharp
V0.20发布



组件化

.NET





“**对话即平台 (CaaP) 是未来**，所以我们已经为使用BotSharp AI BOT平台构建器的.NET开发者提供了完整的工具包来构建CaaP。它为您的企业机器人开放了尽可能多的学习能力，并精确控制AI处理流程的每一个步骤。”

**亮点**

.NET开源架构

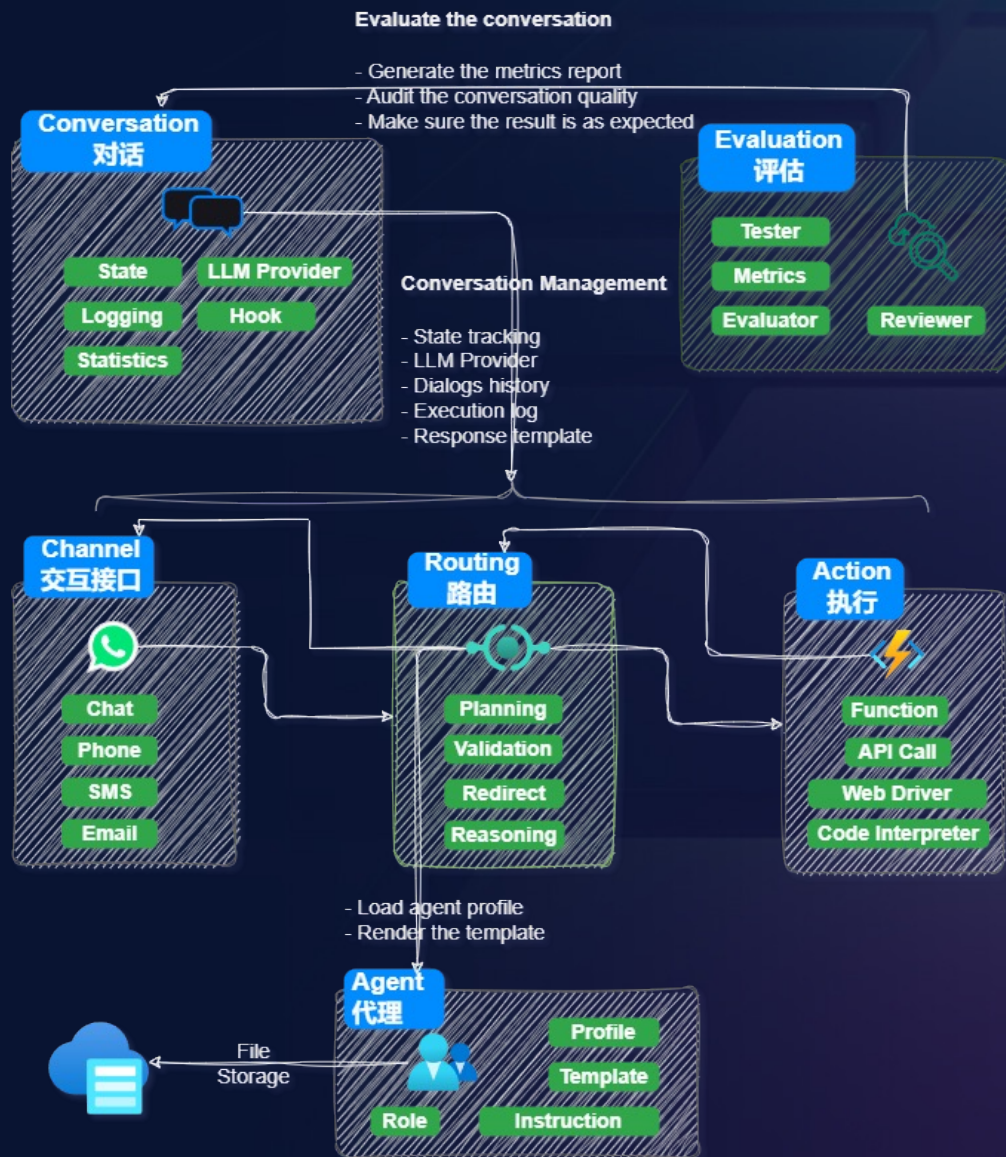
接入企业Function

Token&资费计算

完善的履历日志

调试模式/批量评估





“使企业开发者能够高效地将会话集成到现有业务系统中”

- 内置多代理和具有状态管理的对话系统。
- 支持多种LLM规划方法以处理不同任务。
- 内置与RAG（Retrieval-Augmented Generation）相关的接口，基于内存的向量搜索。
- 支持多个LLM平台（ChatGPT 3.5 / 4.0, PaLM 2, LLaMA 2, HuggingFace）。
- 允许具有不同职责的多个代理合作完成复杂任务。
- 在一个地方构建、测试、评估和审查您的LLM代理。
- 内置用SvelteKit编写的Web实时聊天用户界面。
- 抽象标准的富内容数据结构。与Facebook Messenger、Slack和Telegram等流行消息渠道集成。
- 提供RESTful开放API和WebSocket实时通信。



01

Plugin Loader
插件

02

Hooking钩子
[Hook&Event构设计]

03

Authentication
认证

04

Agent Profile
代理配置文件

05

Conversation & State
对话与状态

06

Routing & Planning
路由与规划

07

Templating
模板

08

File Repository
文件仓库

09

Caching
缓存

10

Rich Content
富文本

11

LLM Provider
大语言模型



数据存储

BotSharp.Core.Repository
BotSharp.Plugin.MongoStorage

LLMs

BotSharp.Plugin.AzureOpenAI
BotSharp.Plugin.GoogleAI
BotSharp.Plugin.MetaAI
BotSharp.Plugin.HuggingFace
BotSharp.Plugin.LLamaSharp
BotSharp.Plugin.SemanticKernel

消息/渠道

BotSharp.OpenAPI
BotSharp.Plugin.ChatHub
BotSharp.Plugin.MetaMessenger
BotSharp.Plugin.Twilio
BotSharp.Plugin.TelegramBots
BotSharp.Plugin.WeChat

RAGs

BotSharp.Plugin.KnowledgeBase
BotSharp.Plugin.Qdrant

视觉

BotSharp.Plugin.PaddleSharp

工具

BotSharp.Plugin.RoutingSpeeder
BotSharp.Plugin.PizzaBot

UIs

BotSharp.Plugin.ChatbotUI

Updating...



BotSharp框架支持扩展不同的Planning方式，NaviePlanner、HFPlanner，还可以扩展Tree Of Thought。

简单

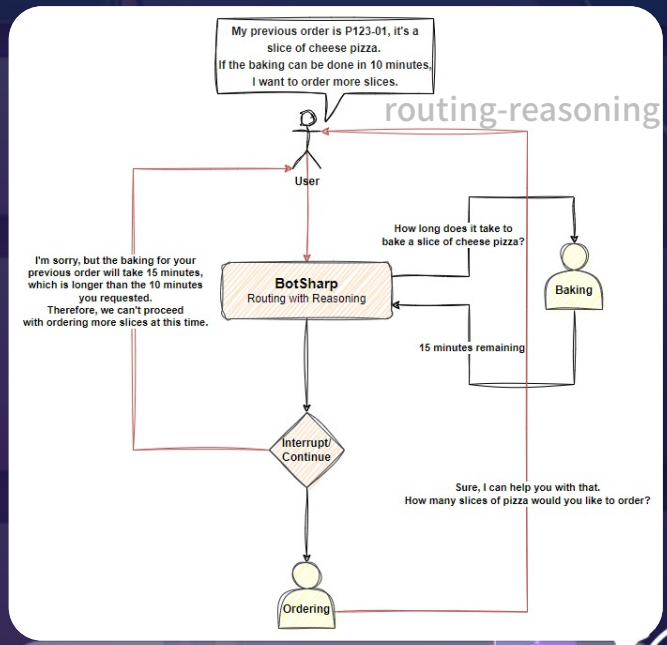
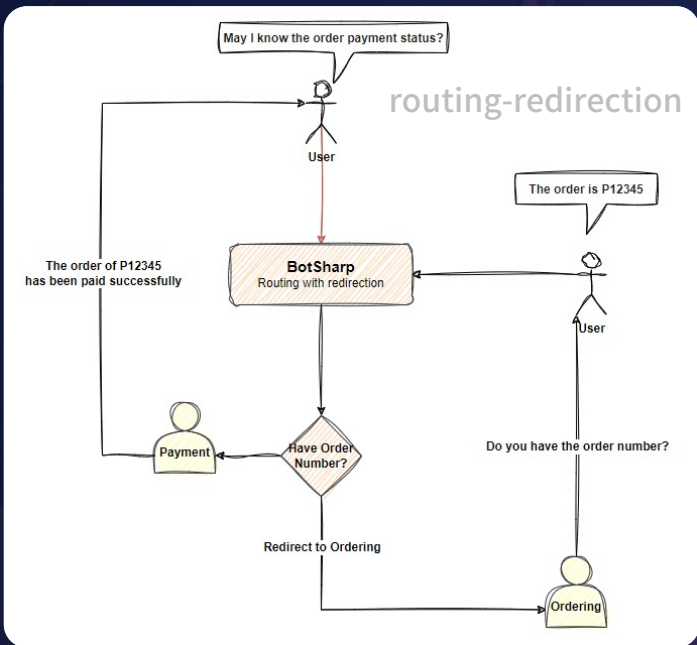
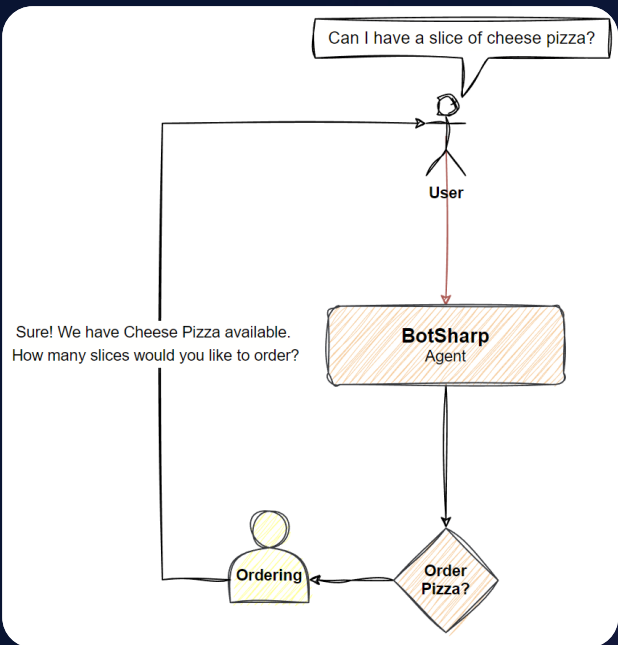
场景复杂度

复杂

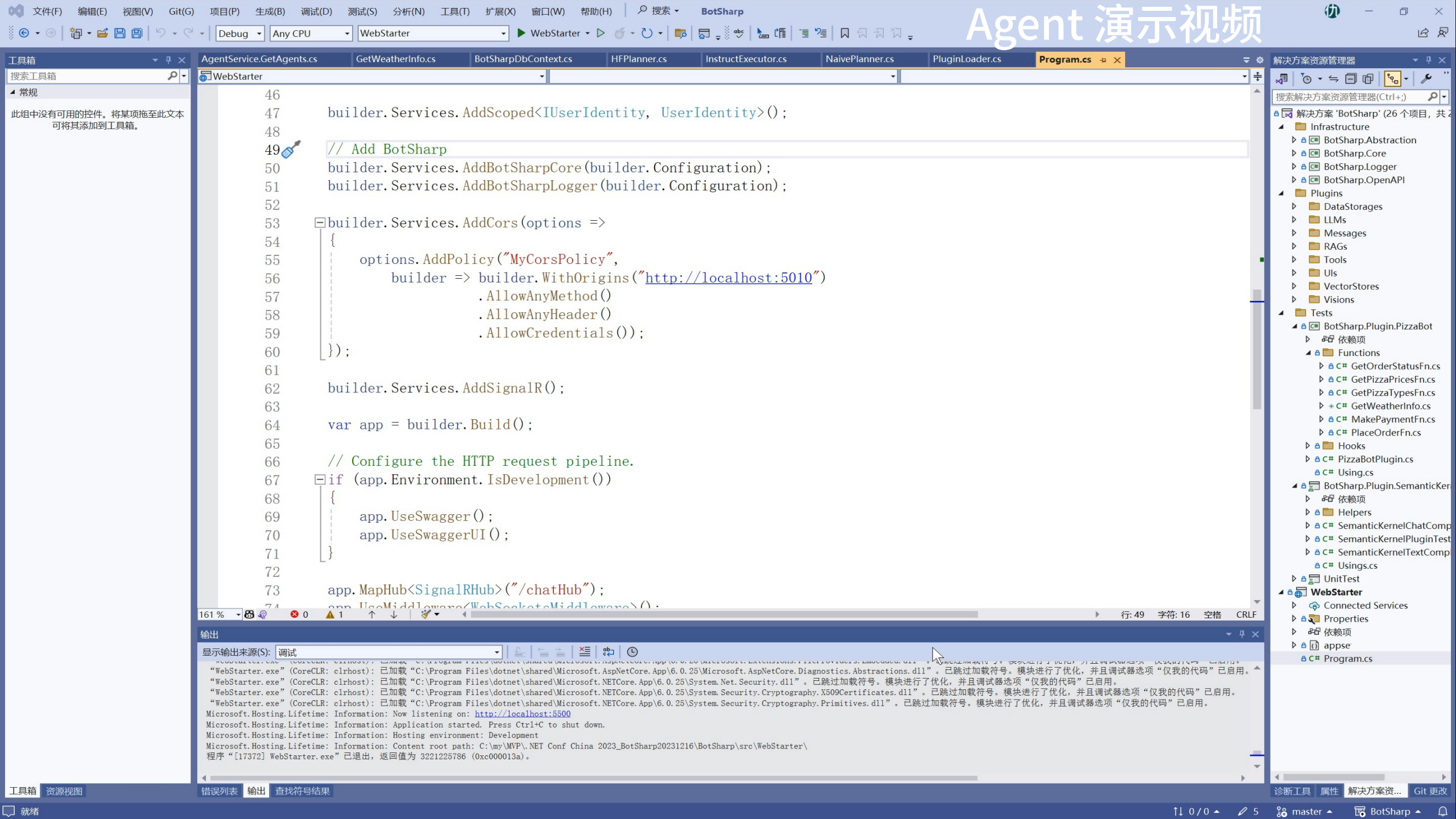
单一Agent

NaviePlanner

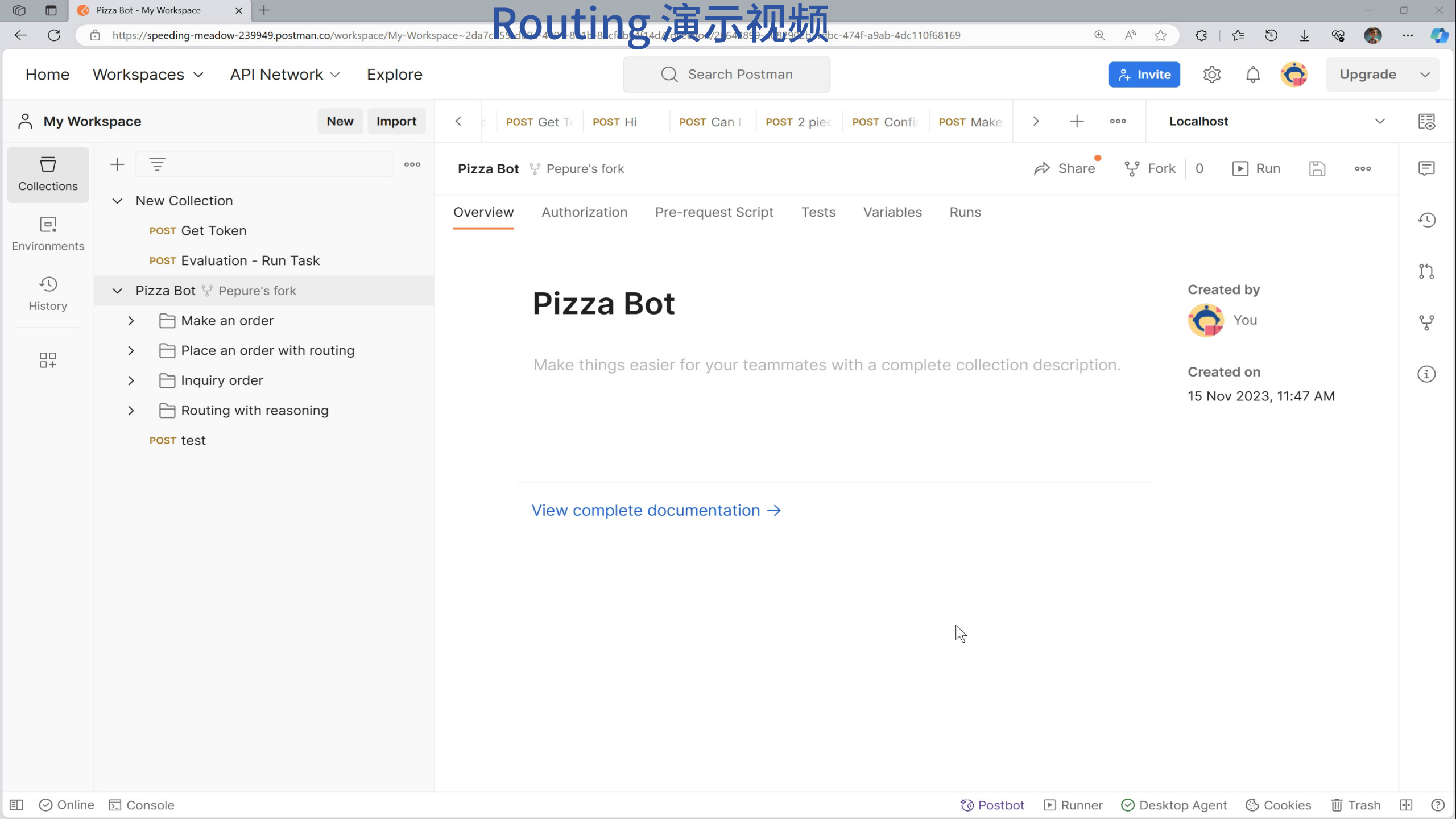
HFPlanner



Agent 演示视频



Routing 演示视频



文件(F)

编辑(E)

视图(V)

Git(G)

项目(P)

生成(B)

调试(D)

测试(S)

分析(N)

工具(T)

扩展(X)

窗口(W)

帮助(H)

搜索

BotSharp

Application Insights

DebugAny CPUWeb Starter

Evaluation 演示视频

EvaluationCo...ationHook.cs

EvaluatingService.cs

IExecutionLogger.cs

IEvaluatingService.cs

EvaluatorSetting.cs

EvaluationResult.cs

BotSharp.Core

BotSharp.Core.Evaluatings.EvaluatingService

_services

2 个引用

```
public async Task<Conversation> Execute(string task, EvaluationRequest request)
{
    var agentService = _services.GetRequiredService<IAgentService>();
    var evaluator = await agentService.GetAgent(_settings.EvaluatorId);
    // Task execution mode
    evaluator.Instruction = evaluator.Templates.First(x => x.Name == "instruction.exec
    var taskPrompt = evaluator.Templates.First(x => x.Name == $"task. {task}").Content;

    var render = _services.GetRequiredService<ITemplateRender>();
    var prompt = render.Render(evaluator.Instruction, new Dictionary<string, object>
    {
        { "task_prompt", taskPrompt }
    });

    var service = _services.GetRequiredService<IConversationService>();
    var conv = await service.NewConversation(new Conversation
    {
        AgentId = request.AgentId
    });

    var result = new EvaluationResult
    {
```

诊断工具

诊断会话: 4:24 分钟

通过从计数器选项中检查计数器来添加计数器图

事件

进程内存 (MB)

CPU (所有处理器的百...

摘要

事件

所有事件(0 个, 共 0 个)

Application Insights 事件(0 个)

内存使用率

截取快照

CPU 使用率

记录 CPU 配置文件

解决方案资源管理器

搜索解决方案资源管理器(Ctrl+;)

解决方案 'BotSharp' (26 个项目, 共 26 个)

外部源

Infrastructure

BotSharp.Abstraction

BotSharp.Core

依赖项

Agents

Conversations

Evaluations

EvaluatingService.cs

EvaluationConversationHook.cs

ExecutionLogger.cs

Infrastructures

Instructs

Planning

Plugins

Repository

Routing

Templating

Users

BotSharpCoreExtensions.cs

Icon.png

Using.cs

BotSharp.Logger

BotSharp.OpenAPI

Plugins

DataStorages

LLMs

Messages

RAGs

Tools

UIs

VectorStores

Visions

Tests

WebStarter

错误列表

整个解决方案

错误 0

显示 13 个警告中的 0 个

显示 1 个消息中的 0 个

生成 + IntelliSense

搜索错误列表

代码

说明

项目

文件

行

禁止显示状态

调用堆栈

搜索(Ctrl+E)

名称

语言

错误列表

局部变量

监视 1

调用堆栈

异常设置

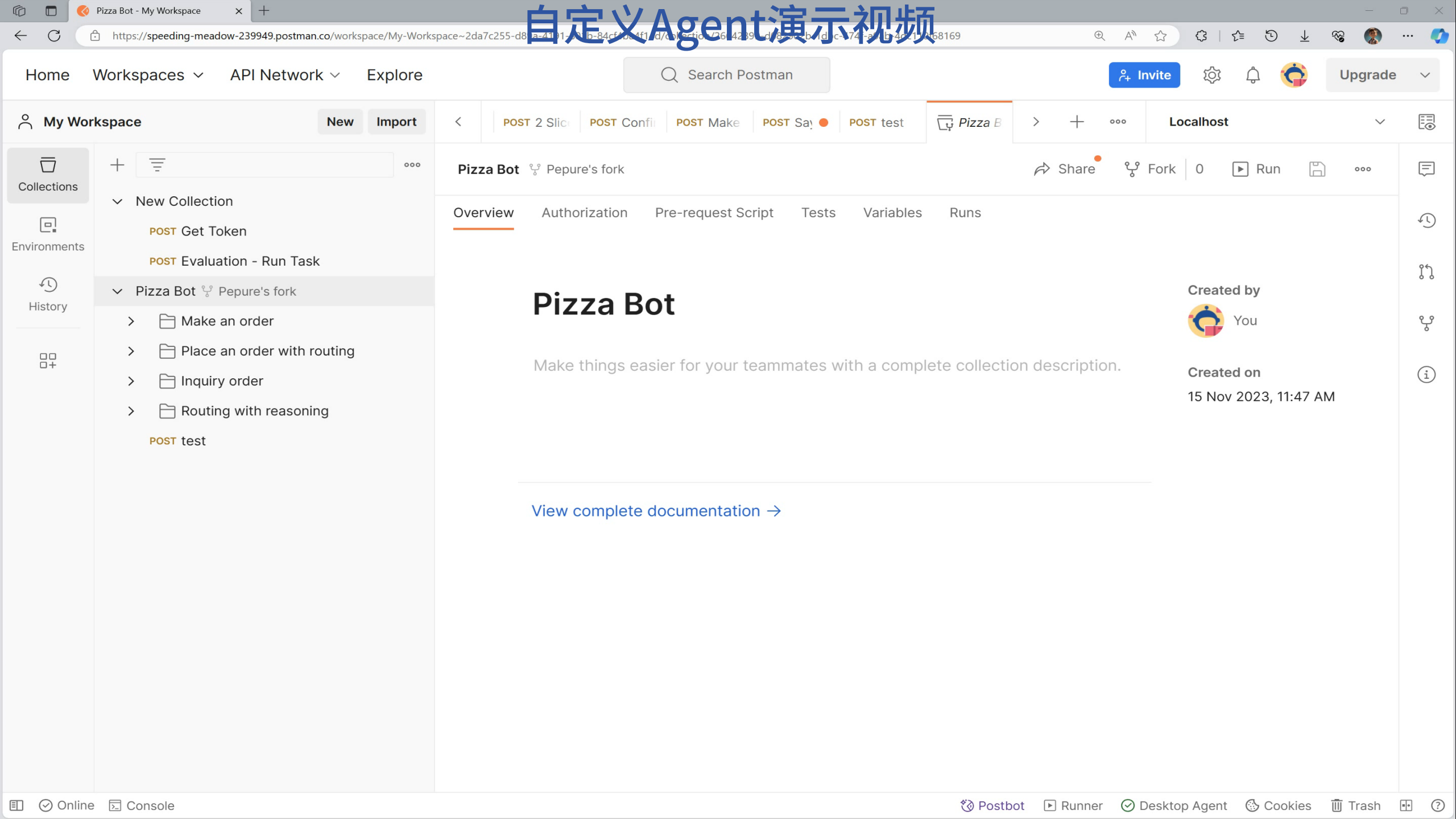
即时窗口

就绪

添加到源代码管理

选择仓库

自定义Agent演示视频



文件(F) 编辑(E) 选择(S) 查看(V) 转到(G) 运行(R) 终端(T) 帮助(H)

资源管理器

DATA

agents

01fcc3e5-9af7-49e6-ad7a-a760bd12dc4a

templates

agent.json

instruction.liquid

b284db86-e9c2-4c25-a59e-4649797dd130

agent.json

functions.json

instruction.liquid

c2b57a74-ae4e-4c81-b3ad-9ac5bff982bd

responses

agent.json

functions.json

instruction.liquid

dfd9b46d-d00c-40af-8a75-3fbdc2b89869

templates

agent.json

instruction.liquid

fe8c60aa-b114-4ef3-93cb-a8efec80f75

agent.json

functions.json

instruction.liquid

fe8c60aa-b114-4ef3-93cb-a8efec80f76

agent.json

functions.json

instruction.liquid

conversations

models

users

大纲

时间线

instruction.liquid

agents > fe8c60aa-b114-4ef3-93cb-a8efec80f75

1 You are

2 If weath

3

4 == reall

5 Jiangsu:

6 Nanchang

UI 演示视频

workspace

https://speeding-meadow-239949.postman.co/workspace/My-Workspace~2da7c255-d89a-41...

Home Workspaces API Network Explore

Localhost

Pizza Bot Pepure's fork

Share Fork 0

Overview Authorization Pre-request Script Tests Variables Runs

Pizza Bot

Make things easier for your teammates with a complete collection description.

View complete documentation →

Created by

You

Created on

15 Nov 2023, 11:47 AM

Postbot Runner Desktop Agent

THANK YOU



<https://github.com/SciSharp/BotSharp>

