



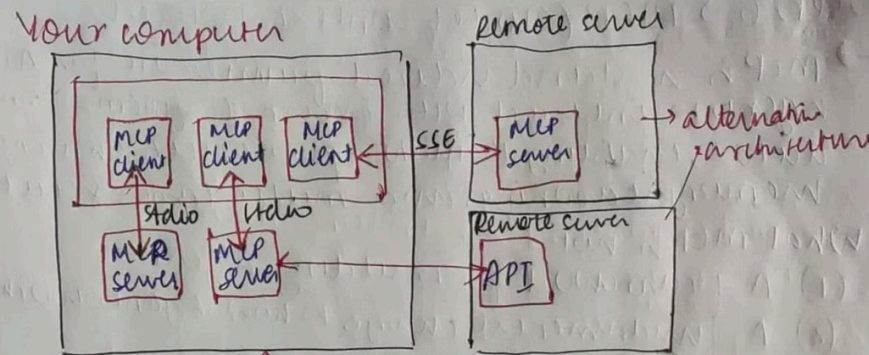
# MCP: A Transformative Framework for AI Agents

This presentation introduces the Model Context Protocol (MCP), a framework designed to enhance AI agent capabilities.

What is MCP?

# Enhancing AI Agent Operations

MCP is a transformative framework for AI agents, enabling them to operate with enhanced memory, reasoning, and multi-task execution. It's a framework for building agents, not a fundamental change to how agents work.



In most of example cases we will be seeing that MCP server are running outside the host and you're connecting it, it still running on your machine. MCP server can takes advantage of functionalities over internet.

Two different transport mechanisms →

- 1) stdio → (standard input/output) → The AI runs and MCP server as a local program, communication via standard input/output.
- 2) SSE → (Server-Sent-Events (SSE)) → The AI connects to a remote server via HTTP and exchanges message asynchronously.

Commands →

- 1) `fetch - params = { "command": "uvx", "args": { "mcp-server-fetch" } }`  
He's also using playwright

This command is going to create an MCP client running within OpenAI Agents SDK.

→ for running MCP server by using JS node npm  
playwright-param = { "command": "npm", "args": { "@play" } }

# MCP: A Standard for Integration



## A Protocol

MCP serves as a standard for AI agent communication.



## Simple Integration

It offers a simple way to integrate tools, resources, and prompts, like a USB-C port for AI applications.

# Why Be Excited About MCP?

While MCP is "just a standard" and not about the agents themselves, it offers significant advantages.

## Exploding Ecosystem

MCP is taking AI agent development to an exploding ecosystem of enjoyment.

## Existing Ecosystem

AI agents already have a big ecosystem, and MCP enhances their capabilities.

# The Three Components of MCP

01

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## Host (LLM App)

An LLM application like Claude or an agent client.

02

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## Agent

The client lives inside the host and connects to the MCP server.

03

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## MCP Server

Provides tools, context, and prompts to the agent.

**Example:** A fetch-MCP server that stays on the web via a headless browser.

# Distributed Agent Runtime

A distributed agent runtime handles the lifecycle and committee across process boundaries.

## Host Service

A host service connected to worker runtimes, handling message delivery and sensors for direct messages.

## Worker Runtime

A worker runtime advertises agents to the host service and handles execution.

## Gremlin

An HTTP server to run and manage on the local host according to the host specified.

# Choosing Your Framework

The most important question isn't "which framework to select?" but rather finding the framework that suits your style and the skills of your team.

"Start with the problem, not the solution." — Andrew Carter, M. J. of H.

Other frameworks like Google ADN, Huggingface SmartAgent, and Hyperwrite M will seem familiar.

# Key Principles for Success

## 1 Metric for Success

Have a clear metric to measure success.

## 2 Workflow Over Autonomy

Favor workflow over autonomy initially.

## 3 Work Bottom-Up

Start simple, then add small pieces to solve big problems.

## 4 Context Over Memory

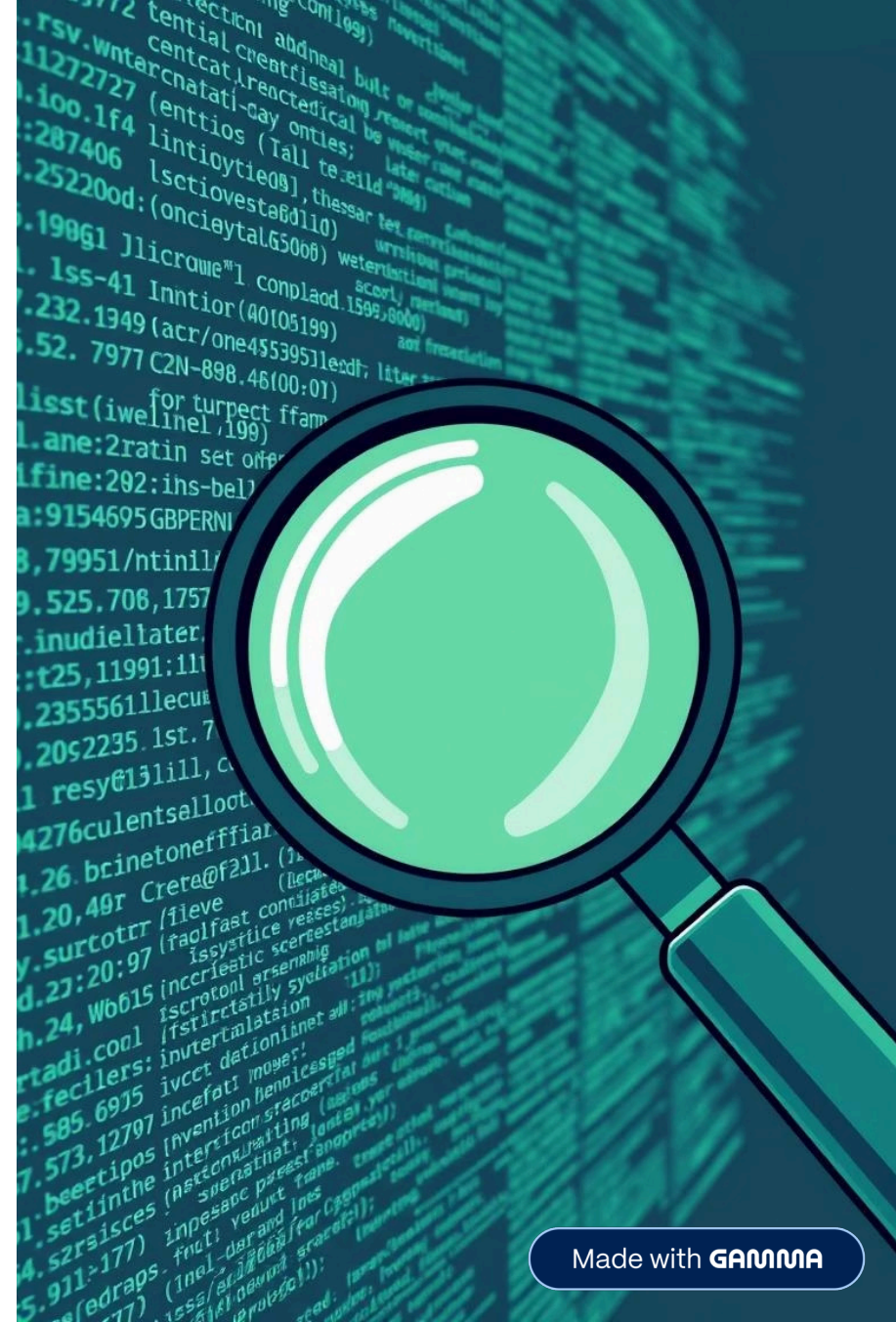
Think context rather than memory for better answers.



# Problem Solving & Debugging

Most problems are sourced with better context.

- Give the LLM the right context to answer its questions.
- Look at the traces.
- Be a scientist, no shortcuts.



# Conclusion & Next Steps

MCP provides a robust framework for enhancing AI agent capabilities, focusing on integration and structured development.

## ✓ Key Takeaways:

- MCP is a standard for agent integration.
- Focus on context for better AI performance.
- Start simple and build up.

Consider how MCP can be integrated into your current projects to unlock new potential for your AI agents.