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Airweave: The Missing Context Layer for AI Agents

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Everyone's creating AI agents at the moment. Microsoft, Google, AWS — you name it. However, they all face the same obstacle:

How can you provide an AI agent with real context from multiple apps and databases without creating a tangled web of APIs?

That's where something called Airweave comes into play.

I recently discovered it — it's open-source, designed for developers, and truly clever in its simplicity.

Instead of building your own context layer for agents, Airweave *serves as* that layer.



Airweave

Context Retrieval for AI Agents across Apps & Databases

What Airweave Actually Does

Airweave connects to your tools — such as Notion, Stripe, or even a PostgreSQL database — and quietly transforms them into a **searchable knowledge base** that your AI agent can access.

Think of it like connecting your work apps to a central memory hub. You don't need to write glue code. You don't even have to think about embedding pipelines or syncing schedules.

Once it's set up, your agent can ask:

“Hey, find all failed payments for John Doe,”

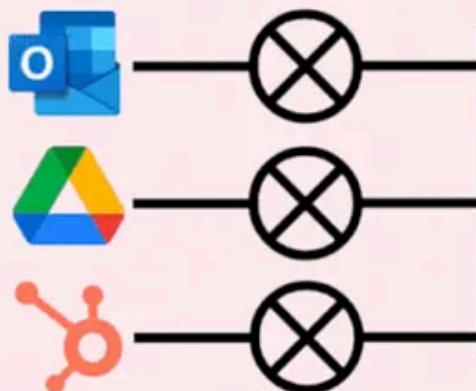
and Airweave fetches it from the right source in seconds.

It's not classic RAG (Retrieval-Augmented Generation). It's more like a *real-time data retrieval fabric* — a semantic search layer that remains in sync with your apps.

Why Your Agent Needs Airweave: Unified, Searchable, Always Fresh

Without Airweave X

CUSTOM CONNECTORS



Scattered data, Disconnected agent

With Airweave ✓

Unified, Searchable, Always Fresh

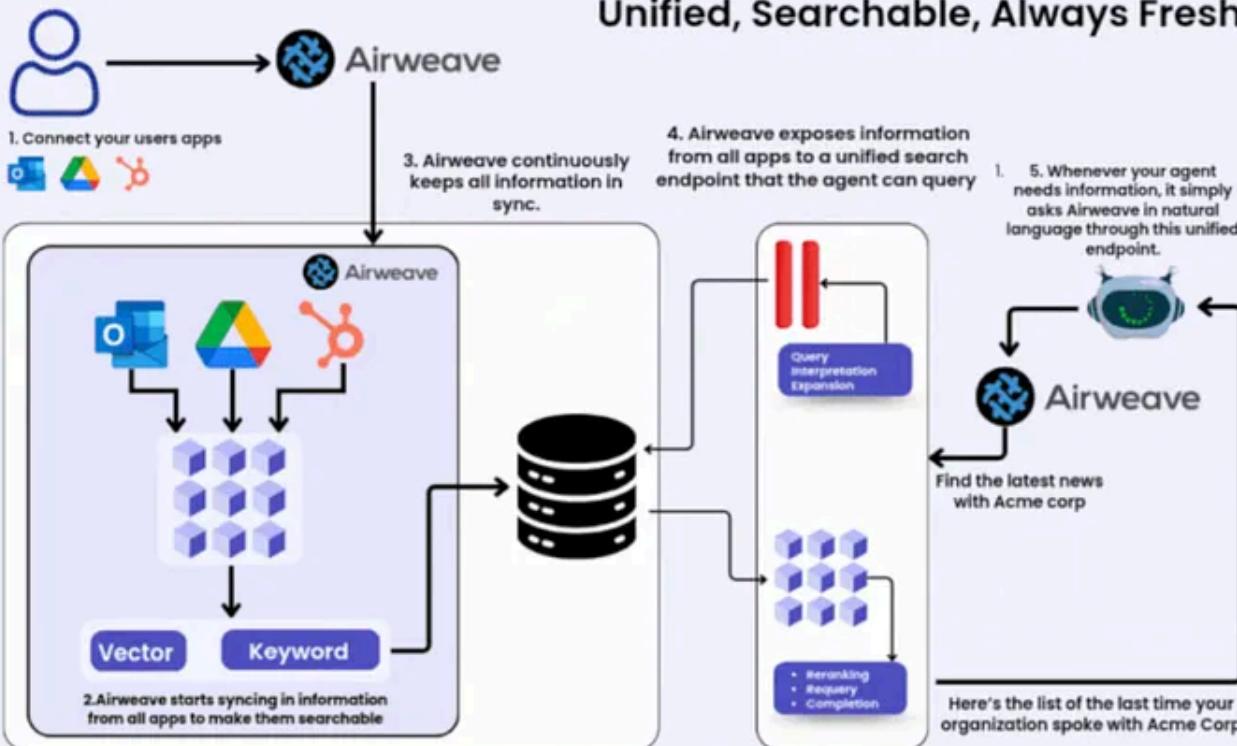


Image by — Brij kishore Pandey

How It Works

Airweave creates something called **collections**. A collection is essentially a group of sources — such as your Stripe account, Notion docs, and Jira tickets — all bundled together under one searchable endpoint.

Behind the scenes, it takes care of:

- Authentication (OAuth2, API keys, etc.)
- Extracting and embedding data
- Keeping it up-to-date using incremental syncs
- Exposing it all via **REST API** or **MCP (Model Context Protocol)**

So instead of querying ten APIs, your agent simply communicates with Airweave.

Supported Integrations

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Setting It Up

You've got two ways to use it:

1. The hosted version at app.airweave.ai
2. Or run it yourself.

If you like local setups, here's how:

```
git clone https://github.com/airweave-ai/airweave.git  
cd airweave  
. ./start.sh
```

Then open: <http://localhost:8080>

That's your dashboard.

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Step 1: Install the SDK

If you're using Python:

```
pip install airweave-sdk
```

Then initialize it:

```
from airweave import AirweaveSDK  
  
airweave = AirweaveSDK(  
    api_key="YOUR_API_KEY",  
    base_url="http://localhost:8001"  
)
```

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Step 2: Create Your First Collection

```
collection = airweave.collections.create(name="My First Collection")  
print(collection.readable_id)
```

Step 3: Connect a Data Source

Let's say you want to pull data from Stripe:

```
source = airweave.source_connections.create(  
    name="My Stripe Connection",  
    short_name="stripe",  
    readable_collection_id=collection.readable_id,  
    authentication={  
        "credentials": {"api_key": "your_stripe_api_key"}  
    }  
)  
print(source.status)
```

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Step 4: Search It

Once the sync is done, you can query everything in one go:

```
results = airweave.collections.search(  
    readable_id=collection.readable_id,  
    query="Find returned payments from user John Doe"  
)  
  
for result in results.results:  
    print(result)
```

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Why It's Cool

What I like about Airweave is that it's *built like a proper system*, not just a quick demo. The stack's solid.

Component	Tech
Frontend	React + TypeScript (ShadCN)
Backend	FastAPI (Python)
Databases	PostgreSQL + Qdrant
Workers	Temporal + Redis
Deployment	Docker Compose <i>or</i> Kubernetes

That means you can scale it, self-host it, or simply use their cloud version and not worry about infrastructure at all.

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Use case

Imagine your company manages a variety of tools — Salesforce, Notion, HubSpot, Stripe, internal databases.

You want an AI assistant that can answer:

“What’s the latest invoice from Acme Corp, and was it paid?”

Normally, you would spend days wiring APIs, parsing responses, embedding data, indexing it, and so on.

With Airweave, you only need to connect all those tools once — and your agent can query them as if they were a single source.

That’s the magic in this. It’s straightforward, tidy, and transparent.

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Final Thoughts

We’ve all been discussing “RAG” and “context windows” for some time. Airweave seems like the next logical step — *a universal context retrieval layer* for AI agents that must look beyond just one app.

You can set it up locally, explore the SDK, and create something real in an afternoon.

[GitHub: airweave-ai/airweave](#)

Microsoft

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