# RAGAS: Context Recall Metric

## What is it?

Measures if the retriever fetched ALL the relevant documents needed to answer the question.
Score: 0-1 (higher = more complete retrieval)

## How it Works

1. Breaks reference answer into individual claims
2. Checks if each claim is supported by retrieved contexts
3. Score = (supported claims) / (total claims in reference)

## What You Provide

**retrieved_contexts:** Documents returned by retriever
**reference:** Ground truth answer (required!)

## Step 1: Capture Data from Your RAG Pipeline

```
# In your RAG chatbot code
docs = vector_db.similarity_search(query)
retrieved_contexts = [doc.page_content for doc in docs]

# Save to logs with ground truth
save_to_logs({
    "question": query,
    "retrieved_contexts": retrieved_contexts,
    "reference": "The correct answer for this question"
})
```

## Step 2: Test with RAGAS

```
from ragas.metrics import LLMContextRecall
from ragas.llms import llm_factory
from openai import AsyncOpenAI

client = AsyncOpenAI()
llm = llm_factory("gpt-4o-mini", client=client)
scorer = LLMContextRecall(llm=llm)

test_case = get_from_logs()

result = await scorer.ascore(
    retrieved_contexts=test_case["retrieved_contexts"],
    reference=test_case["reference"]
)
print(result)
```

## Example 1: HIGH Score (Complete Retrieval)

**Reference:** Cancel within 24hrs for free. After that, fees apply.

**Retrieved Docs:** Contains both cancellation window AND fee info

**Claims:** '24hr free cancel' supported, 'fees apply' supported

**Result:** 2/2 claims found → Score: 1.0 (HIGH)

## Example 2: LOW Score (Incomplete Retrieval)

**Reference:** Cancel within 24hrs for free. After that, fees apply.

**Retrieved Docs:** Only contains cancellation window info

**Claims:** '24hr free cancel' supported, 'fees apply' NOT found

**Result:** 1/2 claims found → Score: 0.5 (LOW)

## Context Precision vs Context Recall

**Precision:** Are relevant docs ranked at the TOP?
**Recall:** Did we retrieve ALL relevant docs?

Precision = ranking quality | Recall = completeness

## Key Insight

Context Recall catches missing information. If your retriever doesn't fetch all necessary docs, the LLM won't have enough context to answer completely. Requires ground truth reference!

## Reference

https://docs.ragas.io/en/stable/concepts/metrics/available_metrics/context_recall/