

RAG Evaluation - Hit Rate Analysis

Actual Relevant Documents (3 total)

1. Amazon rainforest in South America
2. Brazil is the largest country in South America
3. Amazon River is second longest

Retrieved Documents (Top-3)

#	Document	Relevant?
1	Nile River flows through Egypt	<input checked="" type="checkbox"/> No
2	Brazil is the largest country in South America	<input checked="" type="checkbox"/> Yes
3	Mount Everest is the tallest mountain	<input checked="" type="checkbox"/> No

Hit Rate@3 Computation

Question: Is there at least 1 relevant document in the top-3 retrieved results?

Analysis:

- Retrieved document #2 matches our relevant documents
- At least one hit found

Formula:

$$\text{Hit Rate@3} = \begin{cases} 1 & \text{if at least 1 relevant doc found} \\ 0 & \text{otherwise} \end{cases}$$

Result:

$$\text{Hit Rate@3} = 1$$

Final Result

Metric	Value
Hit Rate@3	1