

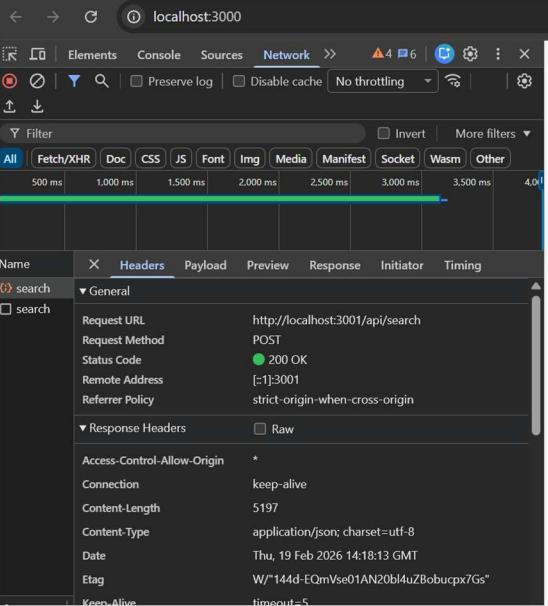
| Database | Collection | Index Name | Status | Queryable | Type | Index Fields |
|----------------|-------------|--------------------------|------------------------------|-----------|--------------|---|
| database_genAi | Testcases | vector_index_bm25 | READY View status details | ✓ | search | "automationManual", "createdBy", "description", "expectedResults", "id", ... more |
| database_genAi | Testcases | vector_index_testcase | READY View status details | ✓ | vectorSearch | "embedding", "id", "module", "title", "description", ... more |
| database_genAi | UserStories | vector_index_userStories | READY View status details | ✓ | vectorSearch | "embedding", "jiraMetadata.projectKey", "status.name", "priority.name", "assignee.displayName", ... more |

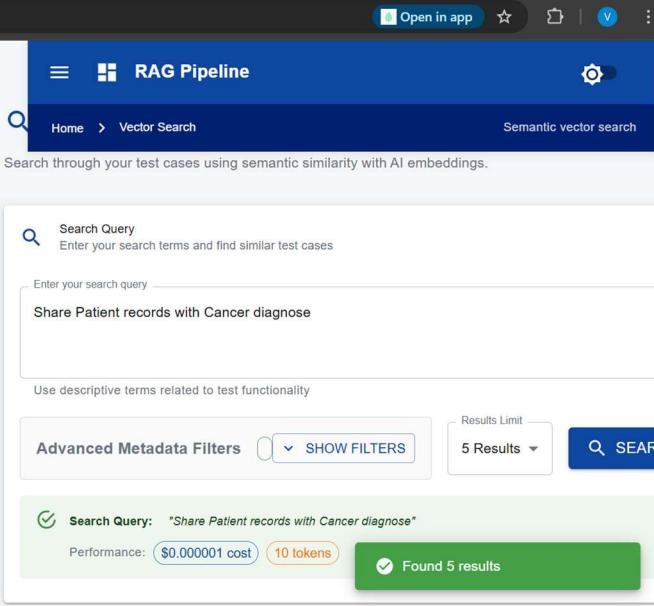
| Type | Index Fields | Documents (Estimated) | Size | Required Memory | Actions |
|--------------|---|-------------------------------|----------|-----------------|---|
| search | "automationManual", "createdBy", "description", "expectedResults", "id", ... more | 6,354 (100%) indexed of 6,354 | 3.73MB | — | <button>QUERY</button> <button>...</button> |
| vectorSearch | "embedding", "id", "module", "title", "description", ... more | 6,354 (100%) indexed of 6,354 | 26.48MB | 26.48MB | <button>QUERY</button> <button>...</button> |
| vectorSearch | "embedding", "jiraMetadata.projectKey", "status.name", "priority.name", "assignee.displayName", ... more | 190 (100%) indexed of 190 | 790.92KB | 790.92KB | <button>QUERY</button> <button>...</button> |

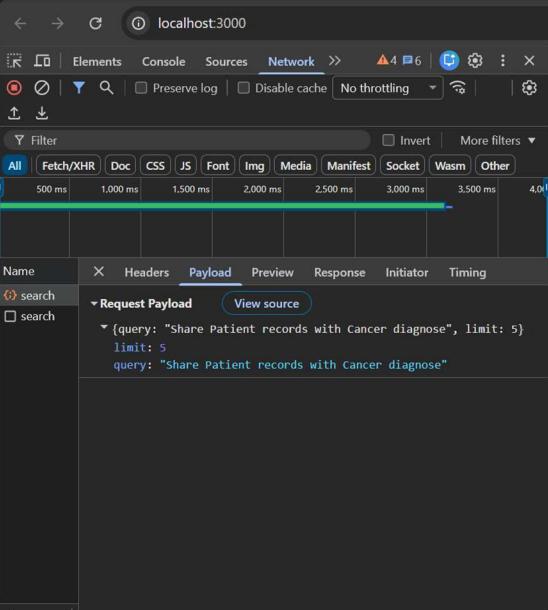
```

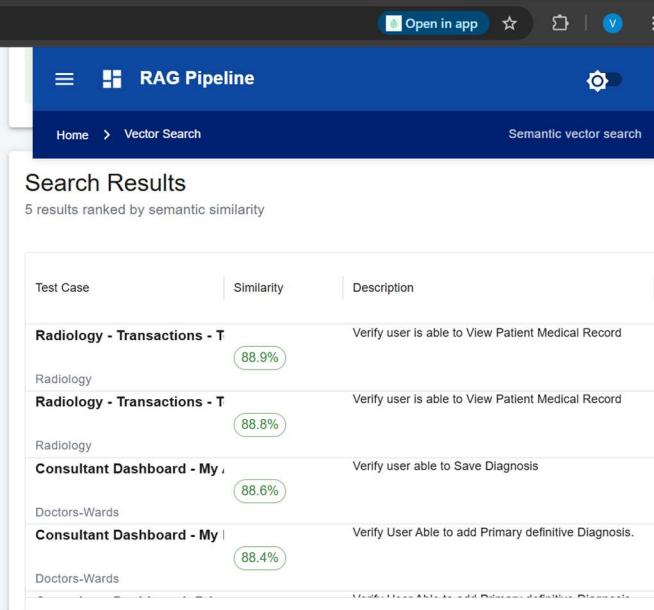
▽ RAG-MONGO-DEMO-V8
  > client
  > node_modules
  > releases
  > server
  ▽ src
    > config
      {} testcases-bm2... U
      {} testcases-vect... U
      {} user_stories.b...
      2
      3 DB_NAME="database_genAi"
      4
      5 COLLECTION_NAME="Testcases"
      6 VECTOR_INDEX_NAME="vector_index_testcase"
      7 BM25_INDEX_NAME="vector_index_bm25"
      8
      9 USER_STORIES_COLLECTION_NAME="UserStories"
     10 USER_STORIES_VECTOR_INDEX_NAME="vector_index_userStories"
     11
     12

```









[localhost:3000](#)

Fetch/XHR Doc CSS JS Font Img Media Manifest Socket Wasm Other

| Name | Headers | Payload | Preview | Response | Initiator | Timing |
|--------|---------|---------|---------|--|-----------|--------|
| search | | | | <pre> 1 { "success": true, "query": "Share Patient records with Cancer diagnose", "filters": {}, "results": [{ "_id": "698f618cf9be2d454394c7ba", "module": "Radiology", "id": "T_C_3815", "preRequisites": "User must have Modality access", "title": "Radiology - Transactions - Technicians", "description": "Verify user is able to View Patient", "steps": "1.Launch the Application.\r\n2.Login to", "expectedResults": "User should be able to View Patient", "automationManual": "Automated", "priority": "P3", "createdby": "Sankar", "createdDate": 45190, "lastModifiedDate": 44985, "risk": "Low", "version": "v3.0", "type": "UI", "createdAt": "2026-02-13T17:37:52.966Z", "score": 0.8836041688919067 }] } </pre> | | |

RAG Pipeline

Home > Vector Search Semantic vector search

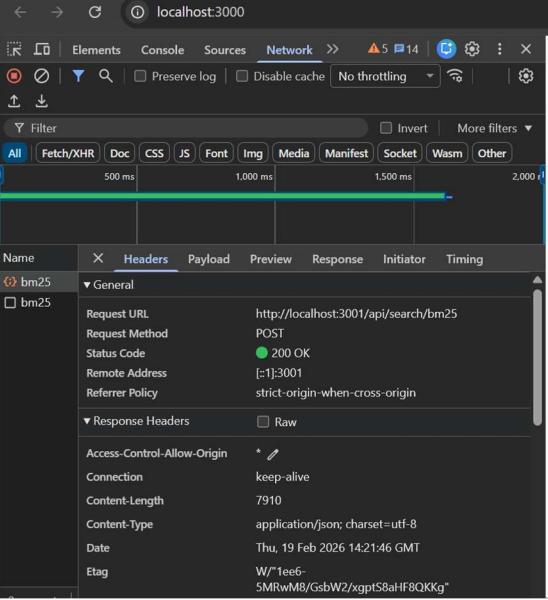
Search Results

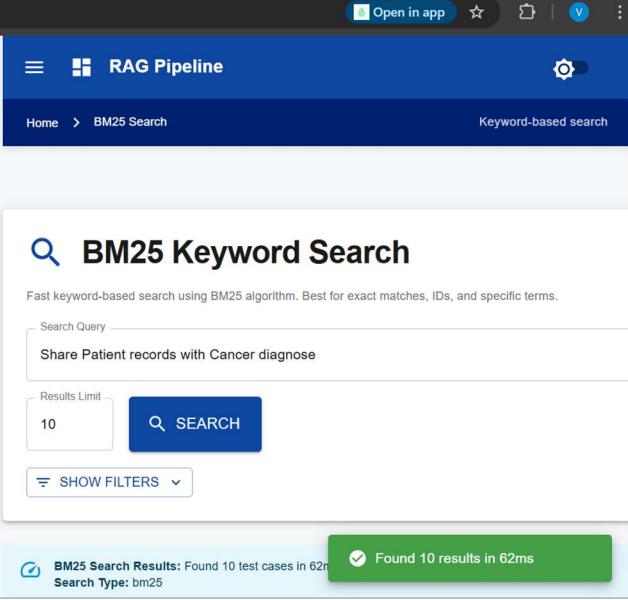
5 results ranked by semantic similarity

| Test Case | Similarity | Description |
|-------------------------------------|------------|---|
| Radiology - Transactions - T | 88.9% | Verify user is able to View Patient Medical Record |
| Radiology - Transactions - T | 88.8% | Verify user is able to View Patient Medical Record |
| Consultant Dashboard - My | 88.6% | Verify user able to Save Diagnosis |
| Consultant Dashboard - My | 88.4% | Verify User Able to add Primary definitive Diagnosis. |

Detailed View

- Radiology - Transactions - Technicians Worklist - worklist - Patient History - Patient Panel - Medical Record** Score: 0.8836041688919067
- Radiology - Transactions - Technicians Worklist - Checked out - Patient History - Patient Panel - Medical Record** Score: 0.8836041688919067
- Consultant Dashboard - My Appointments - OP Dashboard -Consultations - Diagnosis** Score: 0.8856
- Consultant Dashboard - My Inpatients -Pd - Primary definitive** Score: 0.8838
- Consultant Dashboard -Pd - Primary definitive** Score: 0.8836





BM25 Keyword Search

Fast keyword-based search using BM25 algorithm. Best for exact matches, IDs, and specific terms.

Search Query: Share Patient records with Cancer diagnose

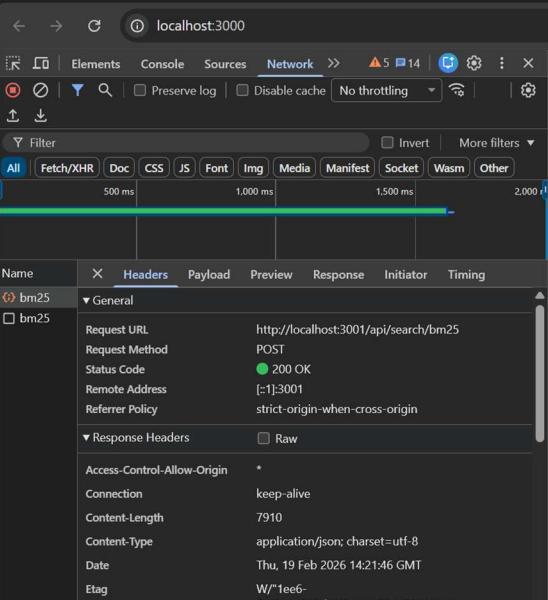
Results Limit: 10

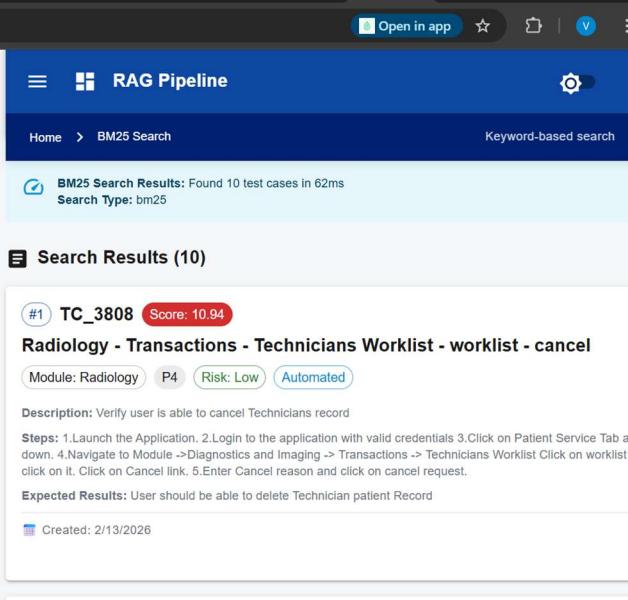
SEARCH

SHOW FILTERS

BM25 Search Results: Found 10 test cases in 62ms
Search Type: bm25

Found 10 results in 62ms





BM25 Search Results: Found 10 test cases in 62ms

Search Type: bm25

Search Results (10)

#1 **TC_3808** Score: 10.94

Radiology - Transactions - Technicians Worklist - worklist - cancel

Module: Radiology P4 Risk: Low Automated

Description: Verify user is able to cancel Technicians record

Steps: 1.Launch the Application. 2.Login to the application with valid credentials 3.Click on Patient Service Tab arrow down. 4.Navigate to Module ->Diagnostics and Imaging -> Transactions -> Technicians Worklist Click on worklist and click on it. Click on Cancel link. 5.Enter Cancel reason and click on cancel request.

Expected Results: User should be able to delete Technician patient Record

Created: 2/13/2026

localhost:3000

Network tab showing a request to "bm25" with a payload containing a query for "Share Patient records with Cancer diagnose".

RAG Pipeline interface showing test case TC_2684 (Score: 9.48) for "Transactions -> Reschedule/Cancel -> Cancel".

Description: To verify the user able to Cancel AHC.

Steps: 1. Launch the application 2. Login to the application with valid credentials. 3. Click on Patient Service Tab and 4. Navigate to Functions -> Transactions. 5. Click on Reschedule/Cancel. 6. Select Cancel radio button from Select and click on "Search" button. 8. If required click on Forget AHC number link enter UHID number and click on "Search Package name in text box. 10. Enter Reason in text box. 11. Click on "Approval" button.

Expected Results: User should be able to Cancel AHC.

Created: 2/13/2026

localhost:3000

Network tab showing a response from "bm25" containing a JSON object with a success key set to true.

RAG Pipeline interface showing test case TC_3812 (Score: 8.94) for "Radiology - Transactions - Technicians Worklist - worklist - Cancel Check".

Description: Verify the user able to cancel Technicians record.

Steps: 1. Launch the Application. 2. Login to the application with valid credentials 3. Click on Patient Service Tab and down. 4. Navigate to Module -> Diagnostics and Imaging -> Transactions -> Technicians Worklist Click on worklist to click on it. Click on Cancel link. 5. Enter Cancel reason and click on cancel request.

Expected Results: User should be able to delete Technician patient Record.

Created: 2/13/2026

localhost:3000

Network

| Name | Status | Type | Initiator | Size | Time |
|--------|--------|-----------|--------------------|--------|--------|
| hybrid | 200 | fetch | HybridSearch.js:14 | 9.8 kB | 4.76 s |
| hybrid | 204 | preflight | Preflight | 0.0 kB | 7 ms |

RAG Pipeline

Hybrid Search (BM25 + Vector)

Combines BM25 keyword matching with semantic vector search for best results. Adjust weights to control the balance.

Search Query: Share patient records with Cancer Diagnose

Results Limit: 10

Search Weights:

BM25 Weight: 50% Vector Weight: 50%

0% 50% 100% 50% 100%

BALANCED (50/50) KEYWORD-HEAVY (70/30) SEMANTIC-HEAVY (50/50)

Found 10 results (9 in both indexes) in 1820ms

localhost:3000

Network

| Name | Headers | Payload | Preview | Response | Initiator | Timing |
|--------|--|---------|---------|----------|-----------|--------|
| hybrid | <div>General</div> <div>Request URL: http://localhost:3001/api/search/hybrid</div> <div>Request Method: POST</div> <div>Status Code: 200 OK</div> <div>Remote Address: [::]:3001</div> <div>Referrer Policy: strict-origin-when-cross-origin</div> <div>Response Headers</div> <div>Access-Control-Allow-Origin: *</div> <div>Connection: keep-alive</div> <div>Content-Length: 9576</div> <div>Content-Type: application/json; charset=utf-8</div> <div>Date: Thu, 19 Feb 2026 14:25:38 GMT</div> <div>Etag: W/2568-blkHiNB9wiShow8choptjExxuDw"</div> <div>Keep-Alive: timeout=5</div> | | | | | |
| hybrid | | | | | | |

RAG Pipeline

Hybrid Search (BM25 + Vector)

Combines BM25 keyword matching with semantic vector search for best results. Adjust weights to control the balance.

Search Query: Share patient records with Cancer Diagnose

Results Limit: 10

Search Weights:

BM25 Weight: 50% Vector Weight: 50%

0% 50% 100% 50% 100%

BALANCED (50/50) KEYWORD-HEAVY (70/30) SEMANTIC-HEAVY (50/50)

Found 10 results (9 in both indexes) in 1820ms

localhost:3000

Network tab showing a hybrid request payload:

```

{
  "query": "share patient records with Cancer Diagnose",
  "limit": 10,
  "bm25Weight": 0.5,
  "filters": {},
  "limit": 10,
  "query": "share patient records with Cancer Diagnose",
  "vectorWeight": 0.5
}
    
```

RAG Pipeline - Hybrid Search (BM25 + Vector)

Search Query: Share patient records with Cancer Diagnose

Results Limit: 10

SEARCH

Search Weights:

- BM25 Weight: 50%
- Vector Weight: 50%

BALANCED (50/50) KEYWORD HEAVY (70/30) SEMANTIC HEAVY (30/70)

localhost:3000

Network tab showing a hybrid response payload:

```

{
  "success": true,
  "searchType": "hybrid",
  "query": "share patient records with Cancer Diagnose",
  "filters": {},
  "weights": {
    "bm25": 0.5,
    "vector": 0.5
  },
  "results": [
    {
      "_id": "698f61dff9be2d454394d49b",
      "module": "Doctors-Wards",
      "id": "TC_5110",
      "title": "Consultant Dashboard - Patient History",
      "description": "Verify user able to View Episode Record in Patient History",
      "steps": "1.Launch the application\n2.Login to the application with valid credentials. 3.Click on Patient Service Tab and drop down. 4. Click on Patient Record Link 5. Click on Episode Record Icon",
      "expectedResults": "The Patients Case Record Details should be displayed"
    }
  ]
}
    
```

RAG Pipeline - Hybrid Search (BM25 + Vector)

#1 TC_5110 Hybrid: 93.7% Found in: both

Consultant Dashboard - Patient History - Episode Record

Module: Doctors-Wards P3 Risk: Low Automated

Description: Verify user able to View Episode Record in Patient History

Steps: 1.Launch the application 2.Login to the application with valid credentials. 3.Click on Patient Service Tab and drop down. 4. Click on Patient Record Link 5. Click on Episode Record Icon

Expected Results: The Patients Case Record Details should be displayed

Score Breakdown:

- BM25: 98.9% (raw: 10.81)
- Vector: 88.5% (raw: 0.89)
- Hybrid: 93.7%

Created: 2/13/2026

#2 TC_4899 Hybrid: 93.1% Found in: both

Patient History - Episode Record

localhost:3000

RAG Pipeline

Score Fusion

BM25+Vector fusion reranking

Search Query: Share patient records with cancer diagnose

Top-K Candidates: 50 | Final Limit: 10 | SEARCH

FILTERS

Groq AI Reranking Results: Found 10 test cases ranked by Groq AI
Timing: Total: 8142ms
Method: BM25 + Vector → Groq AI Semantic Reranking

AFTER RERANKING (FINAL) BEFORE RERANKING (ORIGINAL) COMPARISON TAB

After Groq AI Reranking (10 results)

Fetch/XHR Doc CSS JS Font Img Media Manifest Socket Wasm Other

| Name | Status | Type | Initiator | Size | Time |
|--------|--------|-----------|--------------------|--------|--------|
| rerank | 200 | fetch | RerankingSearch.js | 7.7 kB | 8.15 s |
| rerank | 204 | preflight | Preflight | 0.0 kB | 7 ms |

localhost:3000

RAG Pipeline

Score Fusion

BM25+Vector fusion reranking

Search Query: Share patient records with cancer diagnose

Top-K Candidates: 50 | Final Limit: 10 | SEARCH

FILTERS

Groq AI Reranking Results: Found 10 test cases ranked by Groq AI
Timing: Total: 8142ms
Method: BM25 + Vector → Groq AI Semantic Reranking

AFTER RERANKING (FINAL) BEFORE RERANKING (ORIGINAL) COMPARISON TAB

After Groq AI Reranking (10 results)

Fetch/XHR Doc CSS JS Font Img Media Manifest Socket Wasm Other

| Name | Headers | Payload | Preview | Response | Initiator | Timing |
|--------|--|---------|---------|----------|-----------|--------|
| rerank | <div>General</div> <div>Request URL: http://localhost:3001/api/search/rerank</div> <div>Request Method: POST</div> <div>Status Code: 200 OK</div> <div>Remote Address: [::1]:3001</div> <div>Referrer Policy: strict-origin-when-cross-origin</div> <div>Response Headers</div> <div>Access-Control-Allow-Origin: *</div> <div>Connection: keep-alive</div> <div>Content-Length: 7444</div> <div>Content-Type: application/json; charset=utf-8</div> <div>Date: Thu, 19 Feb 2026 14:28:01 GMT</div> <div>Etag: W/"1d14-1VRlom5/RZRHemENSMrMP3X2x4"</div> | | | | | |
| rerank | | | | | | |

localhost:3000

RAG Pipeline

Home > Score Fusion BM25+Vector fusion reranking

Groq AI Reranking Results: Found 10 test cases ranked by Groq AI
Timing: Total: 5190ms
Method: BM25 + Vector → Groq AI Semantic Reranking

AFTER RERANKING (FINAL) BEFORE RERANKING (ORIGINAL) COMPARISON TABLE

After Groq AI Reranking (10 results)

#1 TC_351 Rerank Score: 0.9500 Was #52

Reports - MIS - Malignant cases report page

Module: Laboratory P2 Risk: Low

Description: Verify that user can able to View Malignant cases report page

Ranking Scores:
Vector Score: 0.8552 Groq Rerank: 0.9500

localhost:3000

RAG Pipeline

Home > Summarize & Dedup AI summarization & deduplication

Search Summarization & Deduplication

Search, remove duplicates, and generate AI-powered summaries of test cases

Search Query: Share patient record with cancer diagnosed

Search Type: Vector Limit: 20

Quick Examples: patient login authentication, merge UHID records, appointment booking, password reset OTP

SEARCH DEDUPLICATE SUMMARIZE WITH AI COPY

Dedup Threshold: 0.85 Summary Type: Concise

The screenshot displays two main components. On the left, the browser's Network tab shows a single request to `http://localhost:3000/api/search/summarize` with a status of `200 OK`. On the right, the RAG Pipeline interface shows an "AI-Generated Summary" for 19 test cases, totaling approximately 300 words. The interface includes a navigation bar with "Home" and "Summarize & Dedup", and a sidebar with various search and summarization options.

The screenshot shows a browser window with two main panes. The left pane displays the Network tab of the developer tools, showing a single request to 'localhost:3001/api/search/deduplicate' with a status of 200 OK. The right pane shows the 'RAG Pipeline' interface, specifically the 'Summarize & Dedup' section. It displays a summary with the following data:

| Count | Status | Percentage |
|-------|--------|------------|
| 20 | Green | - |
| 19 | Green | - |
| 1 | Red | - |
| 5.0% | - | - |

Below this summary, there are two results listed under 'Unique Results (19)'. Each result includes a unique identifier, a 'Unique' badge, a score, and a detailed description.

TC_3838 ✓ Unique Score: 0.8868
Radiology - Transactions - Technicians Worklist - Checked out - Patient History - Medical Record
Verify user is able to View Patient Medical Record
Radiology P3 Priority UI

TC_3815 ✓ Unique Score: 0.8867
Radiology - Transactions - Technicians Worklist - worklist - Patient History - Medical Record
Verify user is able to View Patient Medical Record

localhost:3000

RAG Pipeline

Home > Summarize & Dedup AI summarization & deduplication

SEARCH DEDUPLICATE SUMMARIZE WITH AI COPY ALL

Dedup Threshold: 0.85 Summary Type: Concise

SEARCH RESULTS 20 DEDUPPLICATED AI SUMMARY

Original Results (20)

TC_5110 Score: 0.9387

Consultant Dashboard - Patient History - Episode Record

Verify user able to View Episode Record in Patient History

Doctors-Wards P3 Priority

localhost:3000

RAG Pipeline

Home > Summarize & Dedup AI summarization & deduplication

AI-Generated Summary

Overview of Search Results for "test cases"

| Module | Number of Test Cases | Common Focus |

| ----- | ----- | ----- |

| **Doctors-Wards** | 12 | Viewing Episode Records, Patient Reports, Case Records, MRD worklist Records during various dashboard activities (Consultant, Doctor, Daycare, Nurse). |

| **Radiology** | 4 | Accessing Patient Medical/Episode Records from Technicians' Worklists (both "checked-out" states). |

| **Wards-MRD** | 1 | Viewing a Case Record on the MRD Coding Screen. |

| **Ward-Nursing** | 1 | Viewing Medical Records while raising a request. |

| **Wards-Doctors** | 1 | Viewing Medical Records while raising a request. |

Key Themes

1. **Episode Record Visibility** – The majority of cases (TC 5110, TC 5073, TC 4899, TC 4885, TC

Prompt Template



```
# HEALTHCARE TEST CASE GENERATION

## INSTRUCTION
Generate 6 high-quality test cases for the user story using retrieved test case context. Each must:
- Include 5-8 detailed, numbered test steps
- Define measurable expected results
- Cover positive, negative, and edge cases
- Reference source test cases

## CONTEXT
MongoDB database with 6,000+ healthcare test cases covering Patient Registration, Laboratory, Ward Management, Billing, Prescription, Diagnostics.
Healthcare entities: UHID, PRN, ERN, OTP.

## EXAMPLES
Study the retrieved test cases below for format, terminology, and step structure.
```

COMPLETE RAG PIPELINE

SAVE CONFIGURATION

Complete RAG Pipeline Results (10-Step Process)

1. User Input → 2. Preprocessing → 3. Hybrid Search → 4. RRF Rerank → 5. Dedup → 6. Summarize → 7. Prompt → 8. Generate → 9. Validate –

50 hybrid search results

RRF Re-Ranking Applied

0 duplicates removed

Top 10 results

✓ Validation Passed

10-Step Pipeline Completed

- User Story Input Query Preprocessing (Normalize → Abbreviations → Synonyms) Hybrid Search (BM25 + Vector, weighted fusion)
- RRF Re-Ranking (Cross-encoder, top 10 selected) Deduplication (Cosine > 0.95) Summarization (TestLeaf API)
- Prompt Template + Context (ICEPOT framework) LLM Generation (TestLeaf API) JSON Validation (AJV) HTML Conversion

Query Preprocessing: Applied transformations including synonym expansion, abbreviation handling, and healthcare domain optimization.

Navigation

- Convert to JSON**
Upload and convert Excel files (Test Cases or User Stories)
- Embeddings & Store**
Create and manage embeddings
- Query Preprocessing**
Transform & expand queries
- Vector Search**
Semantic vector search
- BM25 Search**
Keyword-based search
- Hybrid Search**
Combined BM25 + Vector

RAG Pipeline

Home > Prompt & Schema

Configure prompt templates & JSON schemas

💡 Newly Generated Test Cases

6 new test cases generated based on the retrieved context and identified gaps.

| Test Case ID | Title | Module | Priority | Test Type | Preconditions | Test Steps |
|--------------|-------|--------|----------|-----------|---|---|
| | | | | | <ul style="list-style-type: none"> Patient record exists with UHID and a verified mobile number Patient | <ol style="list-style-type: none"> Launch the application and log in as a Diagnostic Technician. Search for the patient using their UHID and review the validation report. Click the "Send" button via WhatsApp. Verify that the system displays a confirmation dialog. |