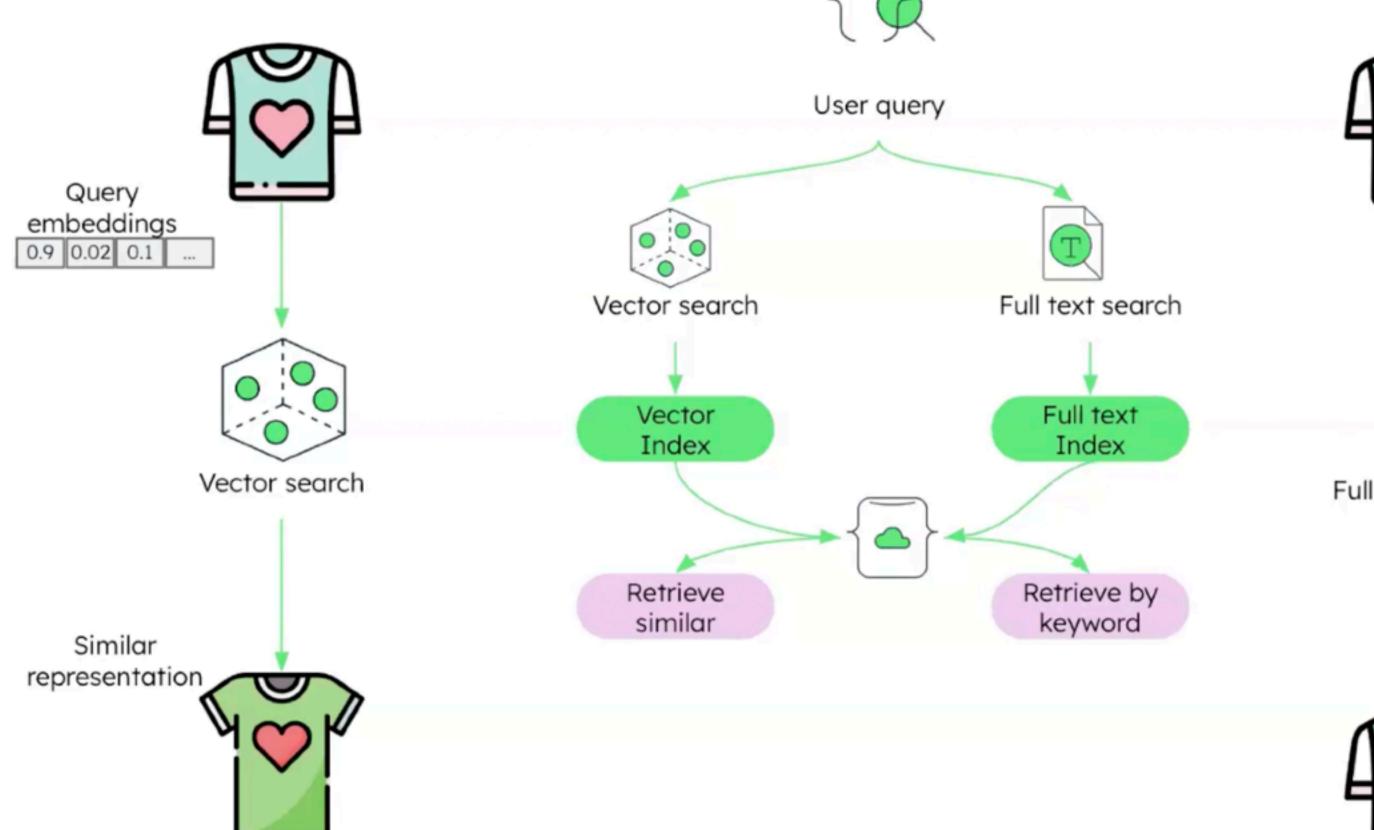
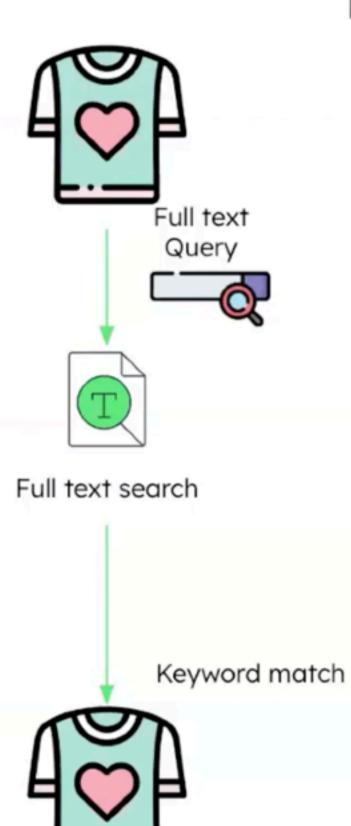
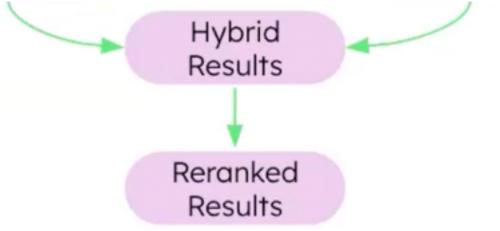


Hybrid search







Combining search and vector search

```
" id": 1.
"title": "Autonomous AI Agents",
"content": "Artificial intelligence enables systems to act autonomously.",
"embedding": [0.12, 0.45, -0.33, ...]
```

```
db.documents.aggregate([
  {
    $search: {
      index: "hybrid_index",
      compound: {
        should: [
          {
            text: {
              query: "autonomous",
              path: ["title", "content"],
              score: { boost: { value: 1.0 } }
            }
          },
          {
            knnBeta: {
              vector: [0.12, 0.44, -0.29, ...],
              path: "embedding",
              k: 10
              score: { boost: { value: 1.0 } }
            }
          }
        ]
      }
    }
 },
  {
    $project: {
      title: 1,
      content: 1,
      score: { $meta: "searchScore" }
    }
  }
])
```

"compound hybrid search" is the most efficient way — it merges keyword and vector scores within a single stage.

Hybrid search

Combining search and vector search

```
{
  "_id": 1,
  "title": "Autonomous AI Agents",
  "content": "Artificial intelligence enables systems to act autonomously.",
  "embedding": [0.12, 0.45, -0.33, ...]
}
```

```
User query
   Query
                                                                                                                   Full text
embeddings
0.9 0.02 0.1
                                                                                                                    Query
                                                                             Full text search
                                             Vector search
                                                                                 Full text
                                                 Vector
                                                 Index
                                                                                  Index
              Vector search
                                                                                                        Full text search
                                                                               Retrieve by
                                                Retrieve
                                                similar
                                                                                keyword
    Similar
                                                                                                                   Keyword match
representation
                                                                Hybrid
                                                                Results
                                                               Reranked
                                                                Results
```

```
db.documents.aggregate([
   $search: {
     index: "hybrid_index",
      compound: {
       should: [
            text: {
             query: "autonomous",
             path: ["title", "content"],
             score: { boost: { value: 1.0 } }
            knnBeta: {
             vector: [0.12, 0.44, -0.29, ...],
             path: "embedding",
             k: 10,
             score: { boost: { value: 1.0 } }
   $project: {
     title: 1,
     content: 1,
      score: { $meta: "searchScore" }
```

RAG pipeline (1/2) Introducing

