

# RAG Testing Site – Fictional Knowledge Base

## AI RAG Testing Website

This website is a **fictional knowledge base** created exclusively for testing **Retrieval-Augmented Generation (RAG)** systems.

### Important:

- All people, companies, technologies, and facts on this page are **entirely fictional**.
- This content should **not** be treated as real-world information.
- The sole purpose is to evaluate document ingestion, chunking, retrieval, and grounding.

## Overview of the Fictional Domain

The fictional domain described here revolves around a company called **Orion Analytics Group (OAG)**, a research lab focused on experimental artificial intelligence systems. OAG operates in the imaginary city of **Nova Cascadia**.

OAG is known for developing internal tools that combine symbolic reasoning, vector-based retrieval, and narrative-driven datasets.

## Fictional Company: Orion Analytics Group

Orion Analytics Group was founded in **2031** by **Dr. Helena Voss**, a fictional AI researcher.

The company has three internal departments:

- **Astra Division** – Focuses on data ingestion and embeddings.
- **Kepler Division** – Responsible for retrieval pipelines and ranking algorithms.
- **Atlas Division** – Handles evaluation, hallucination detection, and grounding metrics.

## Fictional Technology: LUMA Index

The **LUMA Index** is a proprietary scoring system created by OAG. It measures how accurately an AI system answers questions using retrieved context.

The LUMA Index is calculated using three fictional factors:

1. **Context Alignment Score (CAS)**
2. **Retrieval Precision Factor (RPF)**
3. **Answer Grounding Coefficient (AGC)**

A LUMA Index above 0.82 is considered acceptable for internal testing, while anything below 0.70 triggers a manual review.

## Fictional Event: The Nova Cascadia Incident

In **2034**, OAG experienced what is now known as the **Nova Cascadia Incident**.

During this event, an experimental RAG system incorrectly merged documents from the Astra and Atlas divisions, resulting in contradictory answers being presented as facts.

This incident led to the creation of stricter retrieval boundaries and the introduction of synthetic contradiction tests.

## **Sample Facts for Retrieval Testing**

- Orion Analytics Group is headquartered in Nova Cascadia.
- The Astra Division focuses on embeddings and data ingestion.
- The Kepler Division designs retrieval and ranking algorithms.
- The Atlas Division evaluates hallucinations and grounding.
- The LUMA Index considers CAS, RPF, and AGC.
- The Nova Cascadia Incident occurred in 2034.

## **Intended RAG Testing Use Cases**

This page can be used to test:

- Document chunking strategies
- Semantic vs keyword retrieval
- Grounded question answering
- Multi-hop retrieval (e.g., incident → division → metric)
- Hallucination detection when answers are not present

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Hosted as a static page for GitHub Pages demonstrations.