

INTRODUCTION TO HEADAI VISUALIZER

Headai Visualizer is a tool powered by Headai's AI engine, Graphmind, that generates interactive semantic maps—visualizations of the most relevant themes and concepts emerging from analyzed datasets. These maps are especially valuable for strategic decision-making and for making complex data understandable for a broad audience. The tool transforms textual data into a structured format, highlighting connections and core ideas in a visual and accessible way.

How to Read Analysis Products

The visual concept maps produced by Headai's Graphmind AI present themes and central concepts derived from analyzed data. This guide helps you understand the core functionalities of the visualizer and how to interpret the maps effectively.

Snapshot View

Displays the key concepts related to a specific theme at a certain point in time—e.g., from job advertisement data.

Comparison Maps

Allow you to visually compare two snapshots side by side, helping identify similarities and differences in concepts over time or between datasets.

Competence Maps

Generated by Headai's Graphmind AI, these maps visualize key concepts and their connections within the analyzed text. They enable the analysis of broader datasets than many traditional visualization methods.

Map Colors

The color intensity indicates the frequency or centrality of a concept in the data—darker shades represent more central or commonly occurring concepts.

Concept Placement

The most common concepts appear near the center of the map, while less frequent ones are positioned toward the edges. The spatial distance between concepts reflects their semantic closeness.

Interpreting the Maps

Group discussion is recommended for interpreting the visualizations, as participants can bring in their own perspectives. Use of Post-it notes and stickers is encouraged to mark key findings directly on the maps.

For deeper and to add various custom and/or different insights, it is recommended to use the accompanying Power BI report, which includes tools to help explore the meanings and patterns in more detail.

Reading Maps in Power BI

Hovering over a map in Power BI reveals connections between concepts. Features like "Highlight related concepts" enhance understanding of how terms are semantically linked.

Tools and Functions

The map interface allows for zooming, panning, centering, keyword search, and other interactions that improve the analysis experience.

Your client-specific information to be used:

TOKEN ("token")	No needed.
Server	https://megatron.headai.com/
Contact person	Marko Laiho, marko.laiho@headai.com
Technical contact	Marko Laiho, marko.laiho@headai.com
Charset	UTF-8

Quick Reference for the Headai Visualizer

How to Read and Explore a Headai Knowledge Map

Headai Visualizer helps you explore complex data through an interactive, semantic concept map. Whether you're analyzing trends in artificial intelligence, skills needs in an industry, or research themes in sustainability, the goal is the same:

👉 **Turn abstract data into intuitive insights.**

STEP 1: START FROM THE CENTER

When the map opens, you'll see a web of connected words or concepts.

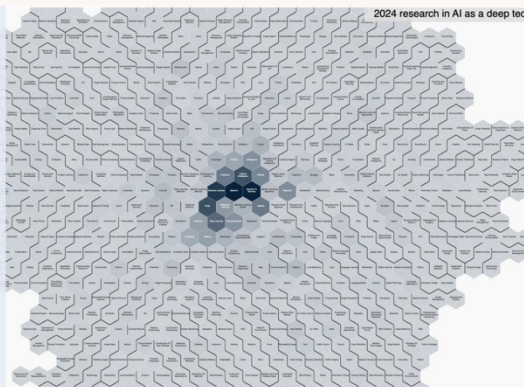
Central Concept: The center shows the most central or common concept based on the data. Example: In AI research, this could be "deep learning," connecting various clusters.

What to Do: Hover over or click the center node.

Ask: "What is this concept?", "Why might it be central?"

Use the 🔦 icon to highlight related terms and understand its context and influence.

🎯 **Goal:** Grasp the main dataset focus and see how other themes revolve around it.



STEP 2: EXPLORE THE NEARBY CLUSTERS

Concepts close to the center are frequent and semantically important.

Observe clusters around the center (e.g., "medical imaging," "autonomous driving," "predictive modeling").

🔍 **What to Do:**

Use the 🔦 icon to highlight concept clusters.

Click 🔄 to recenter around terms of interest and explore direct connections.

Ask:

"Is this relevant to my domain?"

"Are these trends emerging or mature?"

"What innovations might arise here?"

🎯 **Goal:** Identify 2–3 key areas to explore further.

STEP 3: ZOOM TO SPOT PATTERNS AND GAPS

Explore fringe areas or isolated topics to discover niche innovations, specialized research, or underexplored opportunities.

🔍 **What to Do:**

• Drag the map and zoom out.

• Use 🗑️ to temporarily hide irrelevant terms.

• Use 🔍 to search for expected concepts; absence can be insightful.

🎯 **Goal:** Understand data breadth and identify strategically underserved or surprising areas.

🔧 USING THE VISUALIZER TOOLS

🔍 **Search:** Find specific concepts by typing.

👉 **Select Action:** Choose map reactions (highlight, re-center).

🗑️ **Hide Temporarily:** Reduce noise by hiding elements.

🔄 **Recenter:** Focus the map around a specific concepts.

🔦 **Highlight Clusters:** Emphasize related terms.

👤 **Show Data:** View source information behind concepts (papers, job posts).

APPLYING THE MAP FOR STRATEGIC INSIGHT

Practical applications for strategic thinking:

• **Innovation & Trendspotting:** Discover emerging terms and connections (e.g., "remote sensing + deep learning" for environmental monitoring).

• **Team & Stakeholder Exploration:** Facilitate workshops by marking resonant terms; discuss known and new concepts.

• **Strategic Planning:** Inform R&D, identify new markets, and strengthen funding proposals with evidence-based trends.

FINAL TIP: THERE'S NO SINGLE "CORRECT" READING

Each user's unique context shapes map interpretation. The Headai map sparks exploration, prompts questions, and reveals unexpected connections. Think of the map as a strategic mirror: it highlights your focus areas and uncovers unexplored opportunities.

Use Headai Visualizer to show a KnowledgeGraph

Endpoints to be used:

GET <code>HeadaiVisualizer.html</code> Visualizer allows you to generate visualizations from JSONs produced by Headai APIs.	
Params	Type, Default values, Description
<code>json_url*</code>	URL to your .JSON file
<code>iframe</code>	[true false], Enable or disable Full-Screen Mode for IFrame Embedding. Use <code>iframe=true</code> to enable screen size tracking.
<code>center_camera_around</code>	Centers the initial position of the visualization focusing on a specific node in a map. If empty, the camera will focus on the <code>center_node</code> . This parameter only works with valid value for <code>initial_zoom</code> .
<code>initial_zoom</code>	Decimal, Defines the initial zoom of the camera. If empty, the camera will try to show all the concepts of the visualization on the screen. Use 1.0 for "human readable" size.
<code>click_action</code>	[highlight empty], Show the neighborhood of the clicked node. If empty then showing neighborhood of the node while you hover your mouse over the different nodes.
<code>colors</code>	Hexadecimal codes of the colors (RGB) to be used to visualize different groups in the map, separated by a comma and without the numeral (#) character. E.g. "A0A000,F000F0" means #A0A000 to be used for group 1 and #F000F0 for group 2. See "color_scale" below to change how colors are scaled.
<code>color_scale</code>	[sqrt log linear pow flat], Set how the differences between two groups are rendered into a map.
<code>show_number</code>	[value normalized_value id weight group empty], Defines which numerical value of the nodes will be displayed inside the hexagon along with the label of the concepts.
<code>filter_min_weight</code>	Integer (1-5), Show only nodes with the same or bigger Weight.
<code>word_type</code>	[only_compounds] Show only compound words.

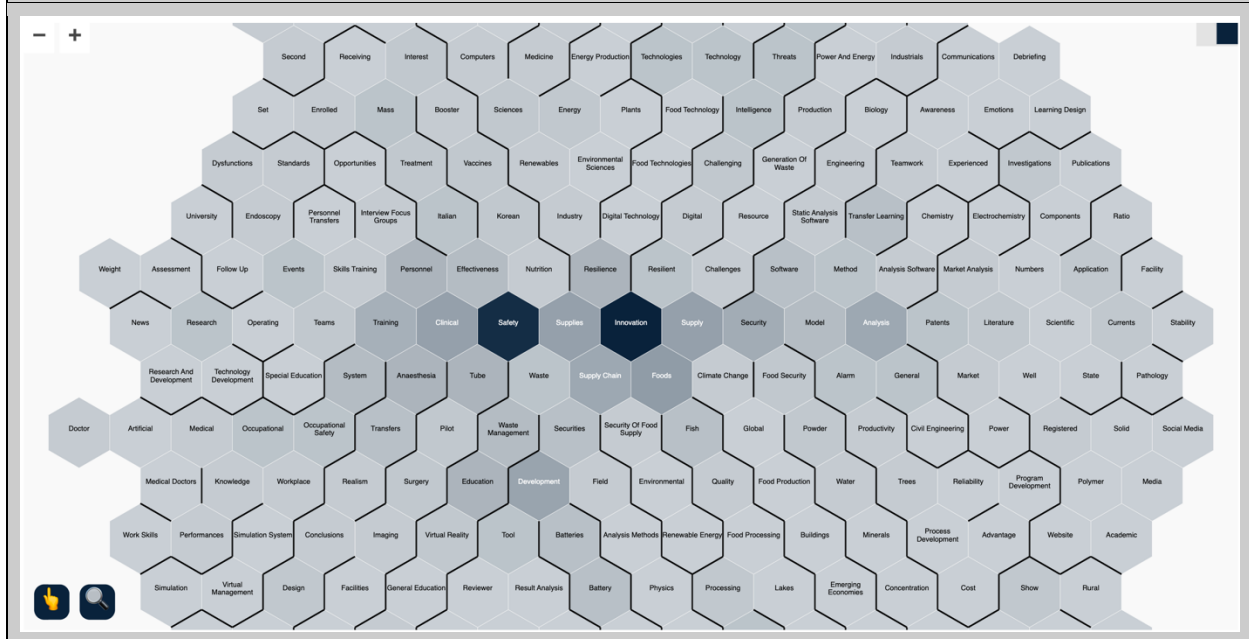
Sample call (copy&paste to your favorite web-browser):

REQUEST EXAMPLE

```
https://megatron.headai.com/HeadaiVisualizer.html?
iframe=true&
center_camera_around=&
initial_zoom=0.5&
json_url=https://megatron.headai.com/analysis/BuildKnowledgeGraph/BuildKnowledgeGraph_VyJs6soxpa1695111267569.json
```

You will get about the following response in case of success:

RESPONSE EXAMPLE



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