ChatGPT: what ai resources are available for technical literature searches

There are several AI-powered tools and resources available for conducting **technical literature reviews** efficiently. These tools can help **search**, **summarize**, **organize**, **and analyze** academic and technical papers. Below are some key categories and tools:

1. AI-Powered Search Engines & Databases

These tools help you **find relevant** research papers and technical documents:

- <u>Semantic Scholar</u> Uses AI to find relevant research papers, extract key insights, and provide citation-based recommendations.
- <u>Google Scholar</u> While not AI-driven in search ranking, it provides **citation tracking** and related articles.
- <u>Connected Papers</u> Maps the relationships between papers and helps discover related research.
- <u>Litmaps</u> A visual tool for tracking and mapping research papers.
- <u>Dimensions</u> Provides academic and industry-focused literature searches with AI-driven recommendations.

2. AI-Based Summarization & Analysis

These tools help summarize **long papers** and extract key insights.

- <u>Elicit</u> AI-powered literature review assistant that suggests relevant papers and extracts key information.
- <u>Scite</u> Uses AI to analyze citations, determining whether papers support, contrast, or mention a claim.
- Explainpaper AI-powered tool that helps break down complex research papers.
- Paper Digest AI-generated summaries of academic papers.
- ChatGPT Can analyze and summarize technical papers if provided with the text.

3. Reference Management & Organization

These tools help **organize** references and assist with citation management:

- **Zotero** Open-source reference manager with AI-assisted citation organization.
- <u>Mendeley</u> AI-powered paper recommendation and reference management.
- EndNote Manages citations and helps generate bibliographies.
- Research Rabbit AI-driven paper recommendation engine.

4. AI for Writing & Reviewing Literature

These tools help in writing and structuring the review:

- Trinka AI-based grammar and technical writing assistant for academic writing.
- **Grammarly** AI-powered grammar and clarity checking.
- Hemingway Editor Helps simplify and clarify technical writing.

5. AI-Powered Data Extraction & Visualization

These tools help extract data, generate figures, and visualize information:

- Open Knowledge Maps AI-powered knowledge maps to explore academic fields.
- <u>Voyant Tools</u> Text analysis tool to visualize trends in research papers.
- SciSpace (Formerly Typeset) AI-powered literature discovery and scientific analysis.

Best Approach for a Literature Review Using AI

- 1. Search for papers Use Semantic Scholar, Google Scholar, or Connected Papers.
- 2. Summarize & analyze Use Elicit, Scite, or Explainpaper.
- 3. Manage citations Use Zotero, Mendeley, or EndNote.
- 4. Write the review Use Trinka, Grammarly, or Hemingway.
- 5. Visualize insights Use Open Knowledge Maps or Voyant Tools.