NASA Space Apps Challenge 2025: Build a Space Biology Knowledge Engine

bioscholar.study

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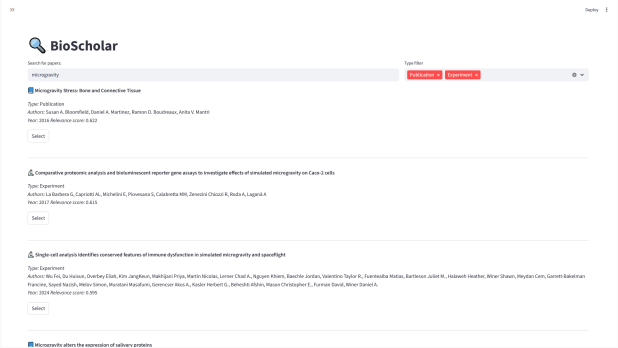
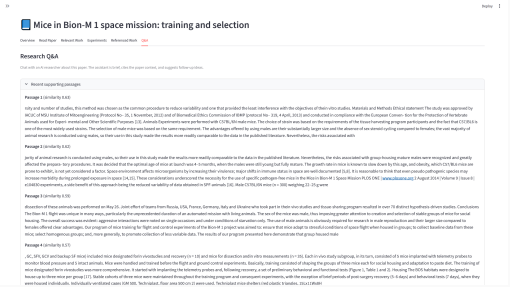
Advanced Search

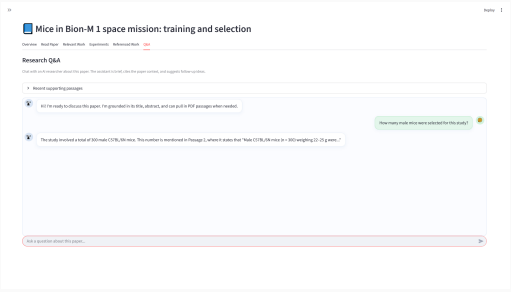
- Search for topics in biology
- Get publications and experiments matching your query
- Results are ranked by relevance using OpenAI text-embedding-3-small



Intelligent Q&A

- Ask questions about the paper
- Get answers by OpenAI's gpt-4o-mini with context (RAG)

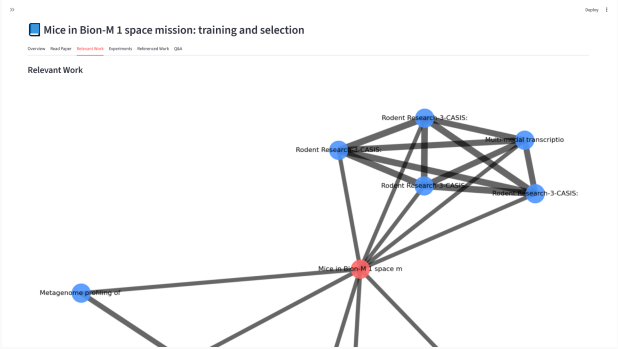




- Get supporting passages from the publication for more reliability

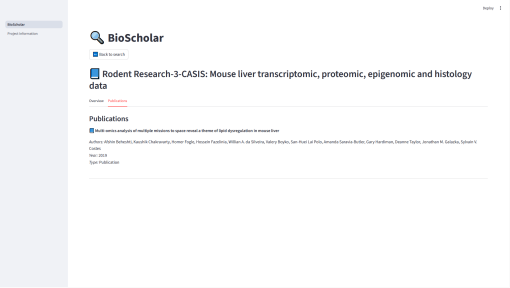
Semantic Graph View

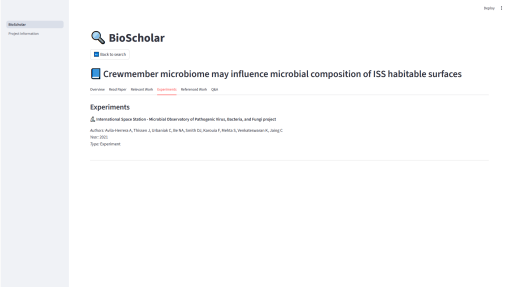
- Use of natural language processing allows for linking similar resources
- Allows to link arbitrary semantically related resources (like papers and experiments), making it more powerful than e.g. citations
- Get relevant similar resources with the use of an adapted version of Google's page rank algorithm



Cross-Referencing

- BioScholar supports different types of resources, and connections between them
- Find publications referencing experiments. . .





- . . . and experiments referencing publications

Integrated PDF Viewer

- View publications directly on BioScholar
- Available for all publications with a known link to a .pdf