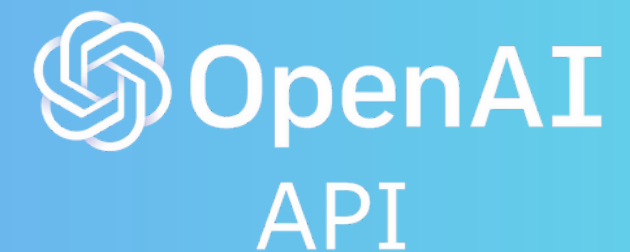




ARCANA
SPACE AGENT

lab
lab
ai

AI-POWERED SPACE EXPLORATION ASSISTANT

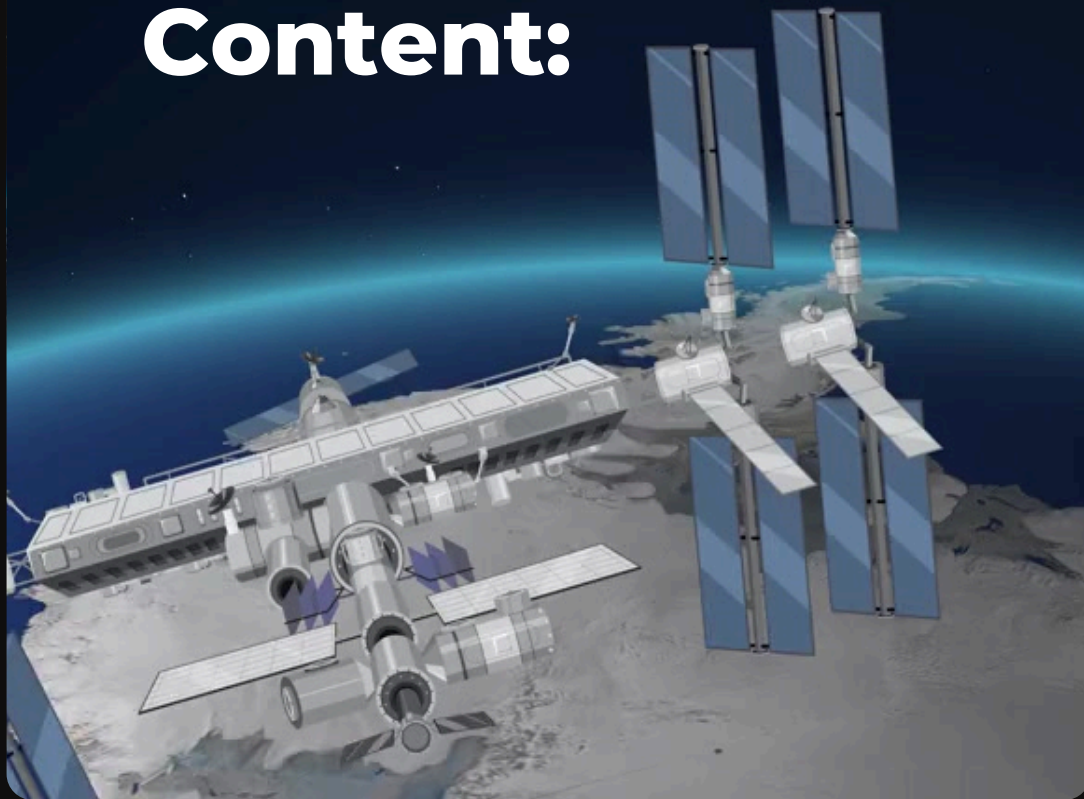




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SPACE AGENT

Problem Statement – Space Data is Complex and Underutilized

**The Challenge:
Unlocking the
Power of Space
Data
Content:**



WHY DO WE NEED ARCANA SPACE AGENT?

- Space data is growing rapidly: 600 satellites in orbit, 60,000 space objects tracked.
- 60% of this data remains underutilized due to its complexity.
- Enthusiasts and students face difficulty understanding space phenomena like orbital mechanics and satellite positions.

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Solution Statement – Real-Time, Accessible Space Insights

ARCANA: EMPOWERING USERS WITH SPACE DATA

- ARCANA SPACE AGENT uses AI to provide real-time space data and personalized recommendations:
- Natural language responses to queries.
- Image recognition to identify celestial objects.
- Personalized stargazing suggestions based on location.
- ARCANA bridges the gap between space data and actionable insights for enthusiasts, educators, and students





What is ARCANA SPACE AGENT?

AN AI-POWERED ASSISTANT FOR SPACE EXPLORATION

- Uses AI models to process space data and provide real-time insights.
- Target audience:
 - Space enthusiasts
 - Amateur astronomers
 - STEM educators
- Transforms complex space data into easy-to-understand content.

A full-body image of an astronaut in a white space suit and helmet, standing against a dark, smoky, or nebula-like background. The astronaut is looking slightly to the right. The text "Expanding Human Reach Beyond Earth" is overlaid on the bottom left of the image in a white, bold, sans-serif font.

**Expanding Human
Reach Beyond
Earth**

CORE FEATURES

- Natural Language Processing (NLP)
- Answers questions like “Where is the ISS?” in simple language.
- Space Image Recognition
- Identifies celestial bodies in user-uploaded images.
- Personalized Recommendations
- Suggests stargazing dates and astronomical events.
- This tool enhances the user experience by providing real-time, personalized space data. / An intelligent search and summarization tool

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ARCANA Architecture

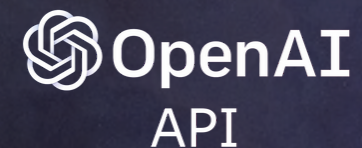
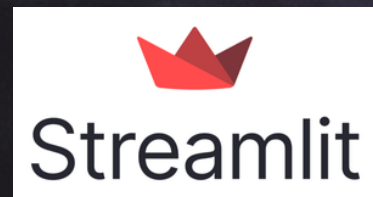
MODULAR, SCALABLE SYSTEM

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**A scalable, modular
design allows future /
expansion and
upgrades.**

FRAMEWORKS/ LIBRARIES:

LangChain, Groq API,
FAISS, OpenAI, Streamlit



BACKEND:

Powered by Python for
data processing and AI
model integration./ For
backend data processing
and API management.



DATA INTEGRATION:

ArXiv API, Wikipedia API,
DuckDuckGo Search API



MARKET OUTLOOK: SPACE AND AI CONVERGENCE

- Global space economy projected to reach \$1.1 trillion by 2040.
- Space apps and edutainment sectors growing at 20% annually.
- Space data market expected to reach \$10 billion by 2030.
- Rising demand for personalized space exploration and STEM education tools.

Future Enhancements

**PIONEERING
MISSIONS**

NEW

Phase 1: Expand to mobile platforms (iOS, Android).
Phase 2: Add AI-powered educational modules.
Phase 3: Integrate space weather predictions and more data sources.



**Charting the
Path for Future
Exploration**


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WHY ARCANA?

- Democratizing space knowledge with accessible and personalized data.
- AI-powered insights provide real-time, actionable information.
- Commercial Opportunity: Tapping into the growing space-tech and STEM education markets.

Global Efforts for a Universal Goal





Settings

Enter your Groq API Key:


.....

☐ Use Voice Search


Built with LangChain, FAISS & Streamlit

⚙️ RUNNING... Stop Deploy


AI-Powered Research Assistant



Hi, I'm an AI research assistant. How can I help you?



What is the latest research in AI space



Thinking...

Ask me about AI research, space, or any topic ...





ARCANA
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TEAM ARCANA SPACE AGENT



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ARCANA
SPACE AGENT

THANK YOU!

JOIN US IN EXPLORING THE
UNIVERSE

Thank you for your attention.

**Together, We Can
Reach the Stars**