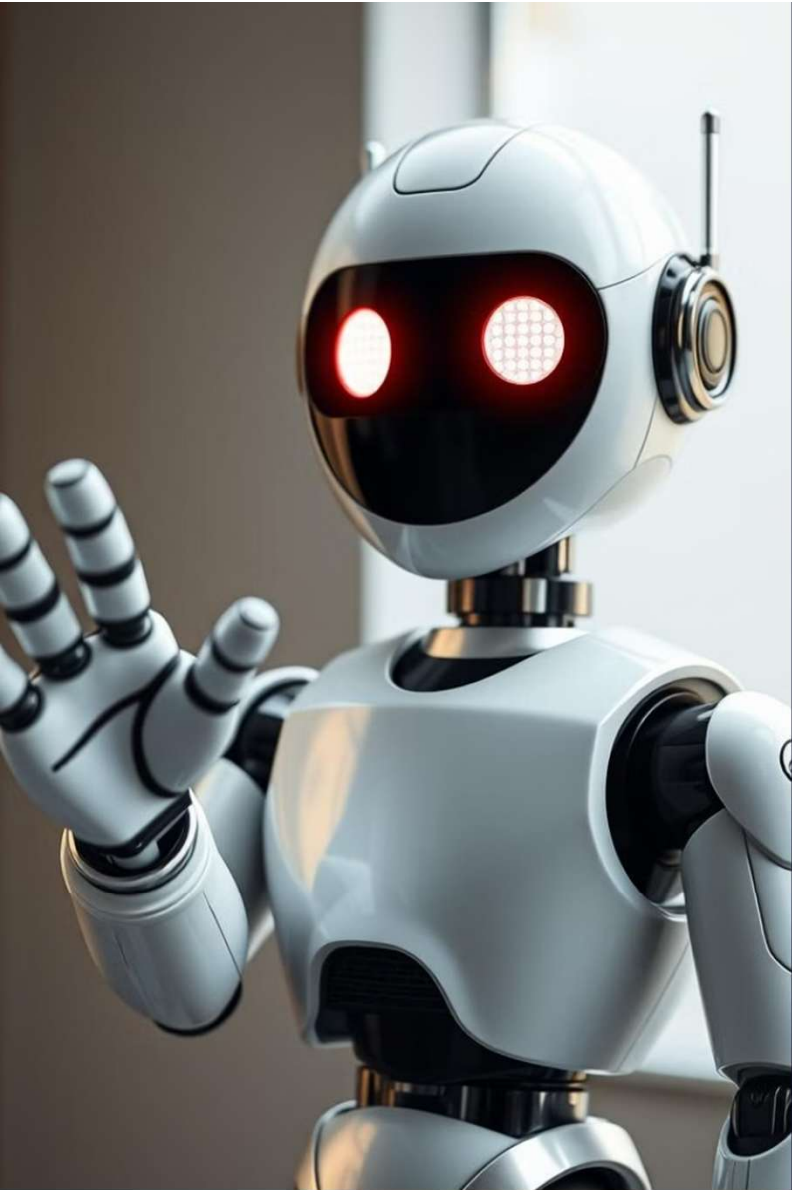


AI In Space Exploration

Powering Discovery, Efficiency, and Innovation.

 **by Achra Srivastava**



What is AI and How Can it Help in Space?

AI and Machine Learning: AI creates autonomous navigation for rovers. Enables data analysis for identifying patterns and anomalies. Automates tasks like construction and maintenance. Predicts and prevents equipment failures.



Benefits of Using AI in Space Exploration

- Increased Efficiency and Speed through faster data processing.
- Reduced Risk to Human Life; robots perform dangerous tasks.
- Discovery of New Insights; AI uncovers hidden patterns.
- Cost Reduction by optimizing resources.

Examples of AI-Powered Space Missions



These are missions using AI: Mars Exploration Rovers, NASA's Deep Space Network and Space Debris Removal.



The Future of AI in Space: What's on the Horizon?

AI will enable self-healing spacecraft by identifying and repairing damage autonomously. Colonizing other planets will be possible with AI. Autonomous probes will venture further into the cosmos.

Conclusion: AI - Paving the Way for a New Era of Space Exploration

AI offers many key benefits and unique applications. Further research for AI technologies is needed. Let's open the floor for questions.

