OrbitWell Systems

AI-Powered Health Companion

Hackathon: Astronauts - Space Agents on a Mission

Our Team

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Introduction

👨‍🚀 Astronauts face unique health challenges in space where immediate medical assistance is limited.

💡 Our AI-powered helps astronauts analyze symptoms and receive medical guidance using advanced AI & NLP.

The problem

📌 Challenges Astronauts Face:

❌ No immediate access to doctors in space

❌ Limited medical resources onboard

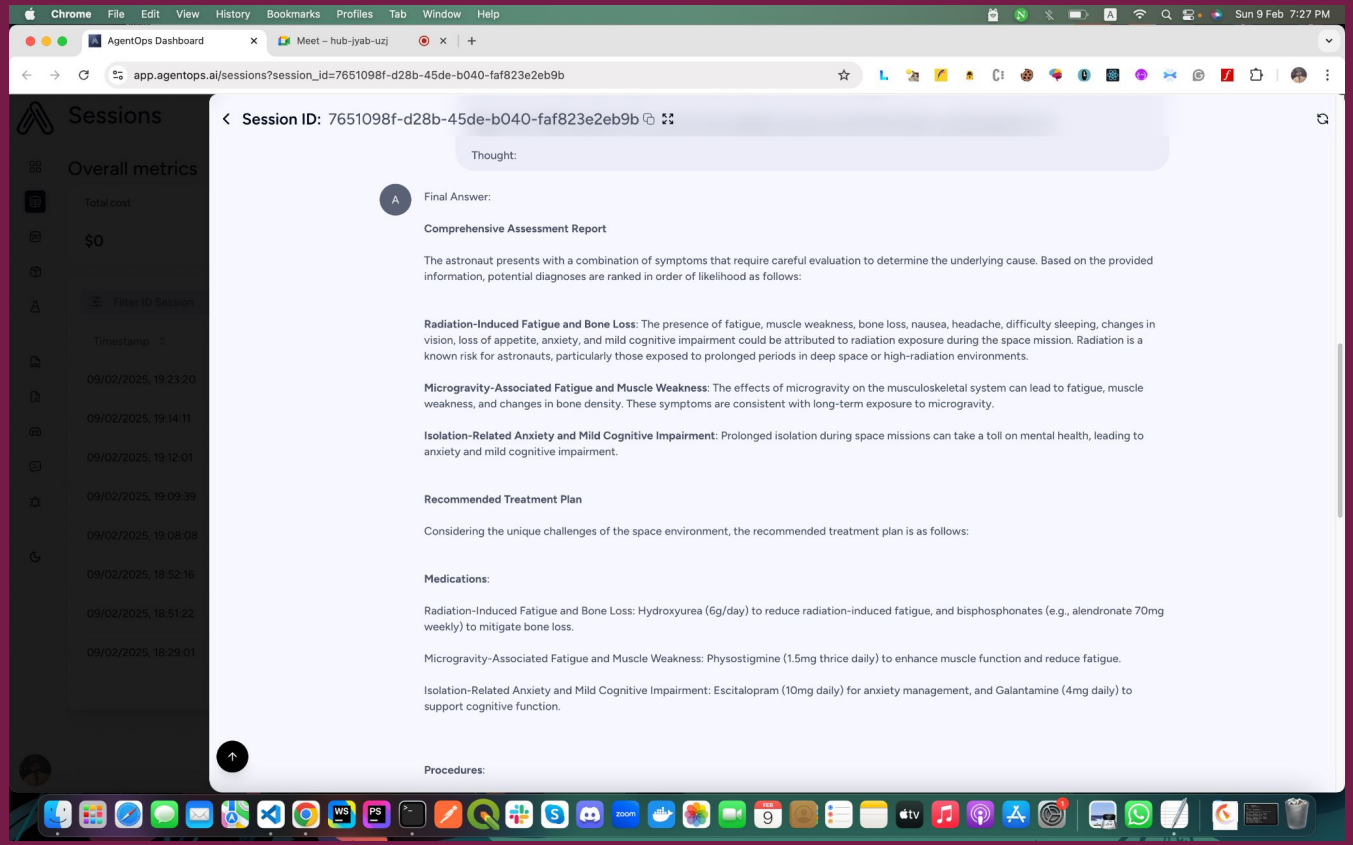
❌ Difficulty diagnosing symptoms without expert guidance

❌ Communication delays with Earth-based medical teams

The solution

- AI-driven symptom analysis
- Health recommendations
- Comprehensive Treatment and Precautions

Product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Thought:
A
Final Answer:
Comprehensive Assessment Report
The astronaut presents with a combination of symptoms that require careful evaluation to determine the underlying cause. Based on the provided information, potential diagnoses are ranked in order of likelihood as follows:
Radiation-Induced Fatigue and Bone Loss: The presence of fatigue, muscle weakness, bone loss, nausea, headache, difficulty sleeping, changes in vision, loss of appetite, anxiety, and mild cognitive impairment could be attributed to radiation exposure during the space mission. Radiation is a known risk for astronauts, particularly those exposed to prolonged periods in deep space or high-radiation environments.
Microgravity-Associated Fatigue and Muscle Weakness: The effects of microgravity on the musculoskeletal system can lead to fatigue, muscle weakness, and changes in bone density. These symptoms are consistent with long-term exposure to microgravity.
Isolation-Related Anxiety and Mild Cognitive Impairment: Prolonged isolation during space missions can take a toll on mental health, leading to anxiety and mild cognitive impairment.
Recommended Treatment Plan
Considering the unique challenges of the space environment, the recommended treatment plan is as follows:
Medications:
Radiation-Induced Fatigue and Bone Loss: Hydroxyurea (6g/day) to reduce radiation-induced fatigue, and bisphosphonates (e.g., alendronate 70mg weekly) to mitigate bone loss.
Microgravity-Associated Fatigue and Muscle Weakness: Physostigmine (1.5mg thrice daily) to enhance muscle function and reduce fatigue.
Isolation-Related Anxiety and Mild Cognitive Impairment: Escitalopram (10mg daily) for anxiety management, and Galantamine (4mg daily) to support cognitive function.
Procedures:

Working

📋 Step 1: Describe symptoms

🔬 Step 2: AI predict the disease

📋 Step 3: Provides possible causes & recommendations

Key Features

✅ AI-Powered Symptom Analysis

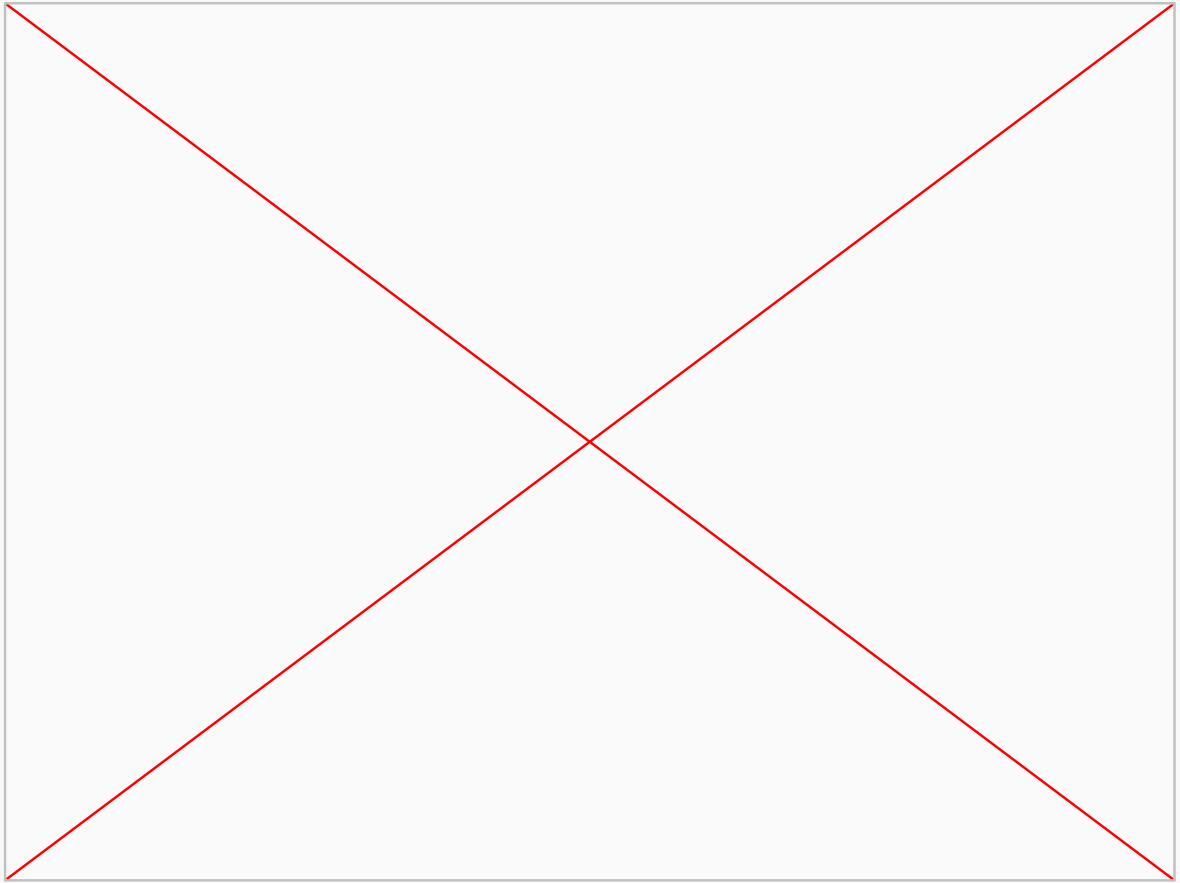
✅ Instant Health Guidance

✅ User-Friendly Interface

Technology Used

1. Crew Ai
2. AgentOps

Video



Future Iterations

1. Integration with Wearable Devices

2. Emergency response automation

3. Multilingual Support

Impact & Conclusion

1.Improves astronaut health by providing medical assistance.

2. Has potential beyond space, like remote healthcare on Earth and deep-sea exploration.

3. It can evolve into a vital technology for various isolated environments on Earth as well.

Thank You