



# EMP SpaceHack

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# Asteroid Mining



Asteroid contain massive amounts of valuable metal such as gold and rare earth metals.

These are used in all electronics, including navigation systems

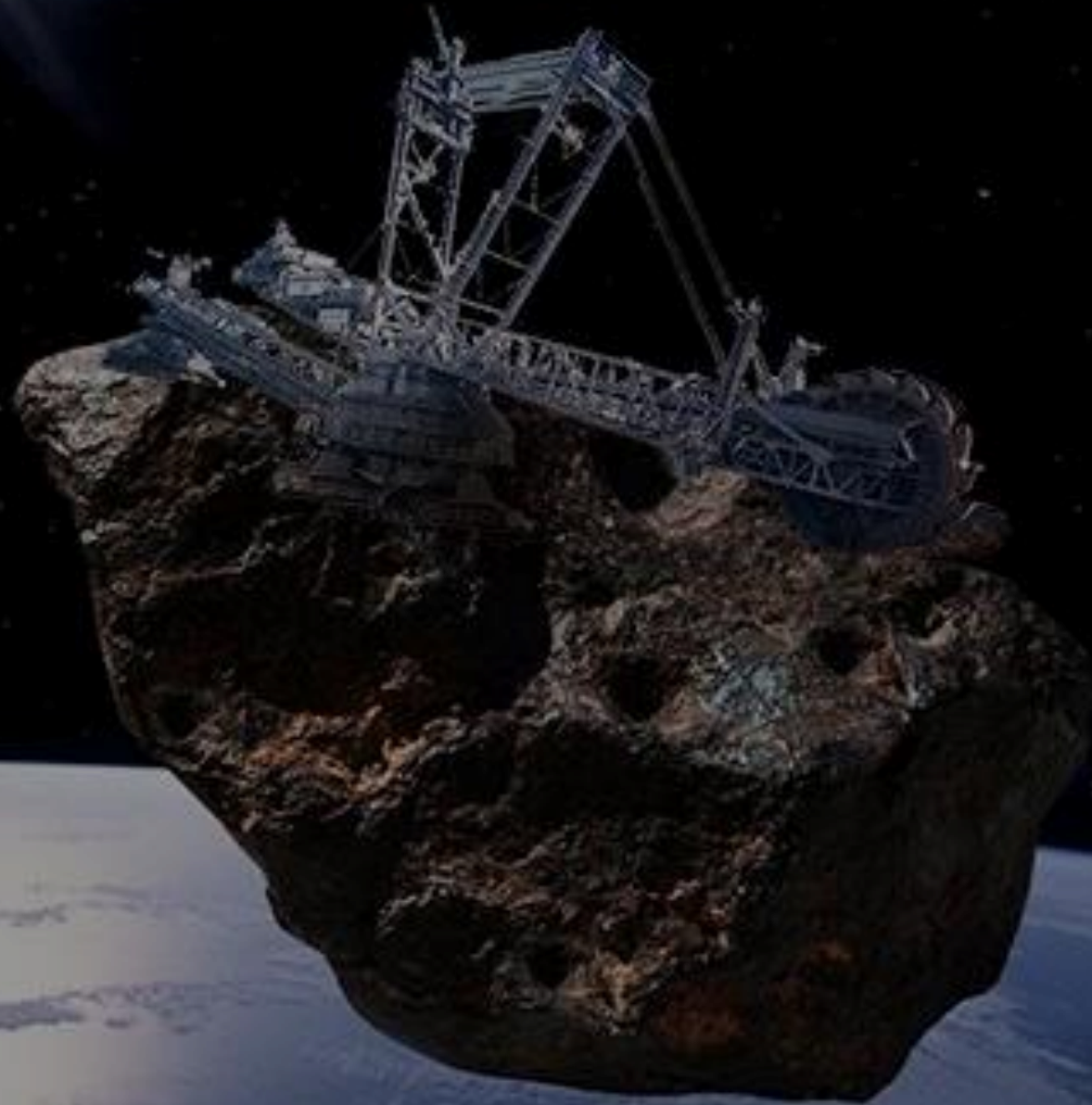
Asteroid Mining is the field that has the potential to impact for all aspects of life.



# 16 Psyche

- 16 Psyche is one of the biggest metal rich asteroid in the solar system
- Its is worth 100,000 quadrillion

- <https://www.space.com/psyche-metal-asteroid-composition>



# Programing in Asteroid Mining

## **Used Algorithms to calculate in Real Time**

- Value of Asteroid, cost of mission and profit.
- Distance from Earth
- Diameter of Asteroid
- Thrust to move asteroid to LEO
- Velocity towards earth





# NASA Real Time Asteroid Model

- We used NASA's Eyes on Asteroid Near Earth Objects to show all asteroid

[https://eyes.nasa.gov/apps/asteroids/#/watch/2024\\_re1](https://eyes.nasa.gov/apps/asteroids/#/watch/2024_re1)

# NASA API View

- Using the Nasa's API we got data that updates every 5 seconds
- This includes asteroid measurements so the program changes output such as distance and profit.



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# Deep Dive into Code

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- We used JavaScript with Replit to program the algorithm as it updates in real time.

<https://replit.com/@srihithchennare/asteroid-mining>



# Benefits of Asteroid Mining

- Eliminate the traditional Earth Mining Industry which protects the environment.
- Provide large supply of rare and valuable metals that will increase technological innovation and materials for all human development.





A photograph of an astronaut in a white spacesuit floating in space, with the Earth's horizon and blue atmosphere visible in the background. The text 'THE NEXT STEP' is overlaid in large white letters.

# THE NEXT STEP

- With the software developed the next step is to add all asteroids into a powerful computer
- Can be used in space mission
- Launch more basic app for general public to follow missions.



*Thank You*