MISSION CONTROL

NOVA ROBOT 1



MADE BY:

Maria Celeste Cuartas Marin

Amaru Jimenez

Jeronimo Echavarria

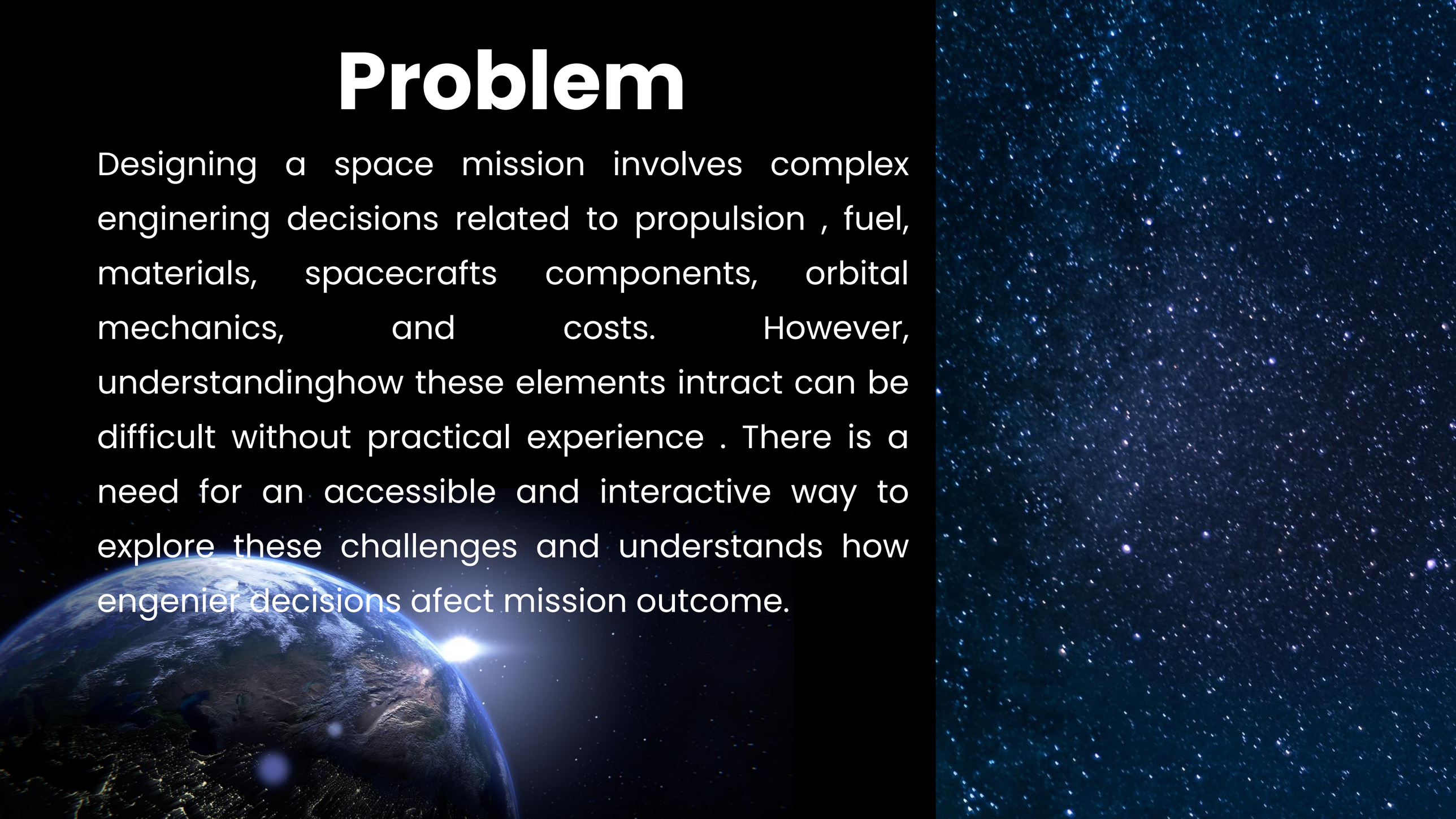
Joaquin Ramirez

Introduction

MISSION CONTROL is an interactive educaccional simulator that allows users to experience the process of designing ,building, and launching a space mission. Trought an inmersive enviroment,participants can explore rocket engineering, orbital mechanics , and the challenges involved in space exploration .

Problem

Designing a space mission involves complex enginering decisions related to propulsion , fuel, materials, spacecrafts components, orbital mechanics, and costs. However, understandinghow these elements intract can be difficult without practical experience . There is a need for an accessible and interactive way to explore these challenges and understands how engenier decisions afect mission outcome.



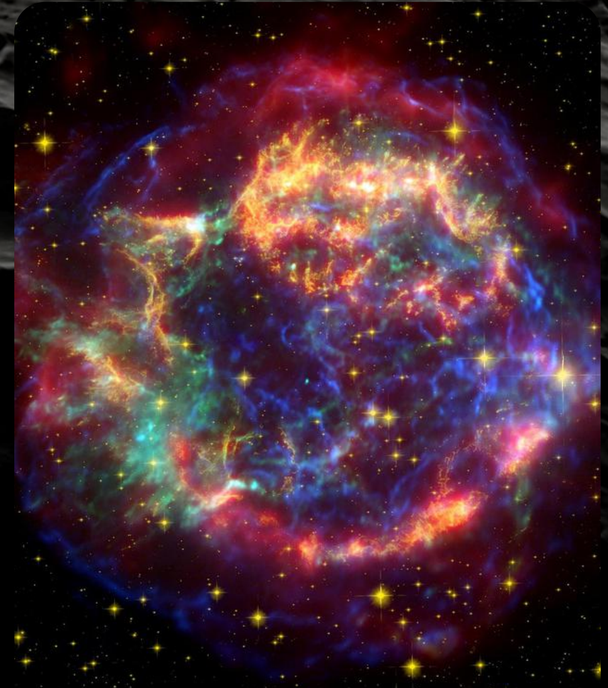
Mission

our mission is to make space exploration and aero espace engineering more accessible trought an interactive simulation experience. We aim to inspire curiosity an encourage users to experiment , make decisions, understand technical challenges, and learn from both successful and unsuccessful missions



Objective

The objetive of MISSION CONTROL is to develop an educacional simulator that allows user to design rockets, select diferent components materials, choose obital destinations, and simulate space missions. The platform aims to each fundamental engineering concepts through experimentation, resource managment, and mission analysis.





Solution

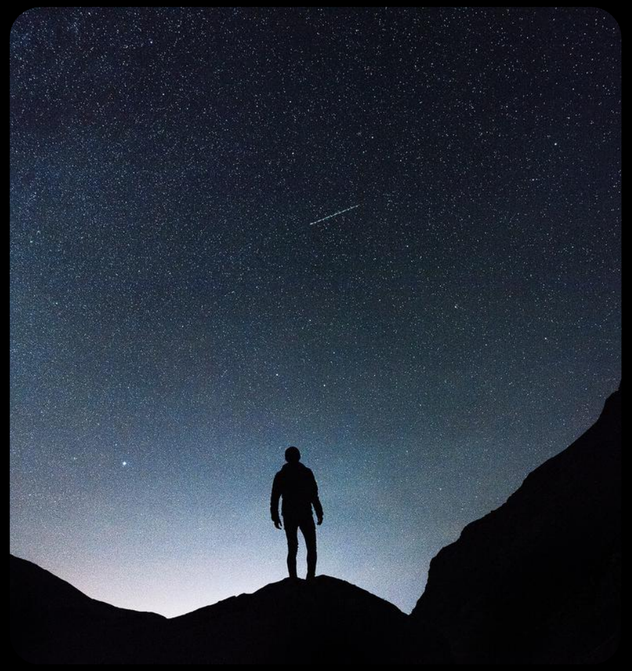
MISSION CONTROL offers a virtual space laboratory where users can build and customize rockets using different engines, fuel tanks, structures , and scientific instruments, each with different characteristics and cost in US dollars. The simulator evaluates the rocket configuration according to the selected mission and explains technical limitations, helping users undertnd how to improve their designs.



How the Game Works

Users select a mission and destination, then build a rocket by choosing its components, engines, materials, and fuel. The simulator tests the launch, shows its trajectory, and generates a report with the results, possible failures, and recommendations.





Conclusion

MISSION CONTROL turns space mission design into an interactive experience where users learn about space exploration, engineering, and rocket simulation. It encourages curiosity, creativity, critical thinking, and learning from mistakes.