CHALLENGE 2 - AMERICANO

MINI SKY EXPLORER

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Challenge 2

Americano

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MINI SKY EXPLORER

Explore the Universe in Augmented Reality

By Michela D’Auria

An AR-powered app that lets users explore the sky through augmented reality or through an immersive 360° galaxy view.

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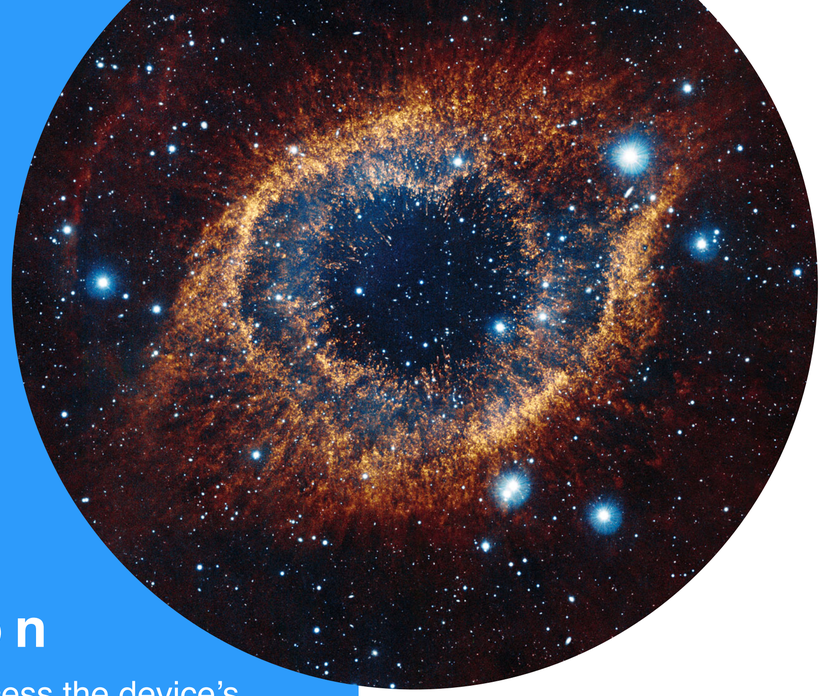
Learning Goals



ARKit

Understand **ARKit** world tracking, motion tracking, and camera integration.

RealityKit

Use **RealityKit** for realistic 3D AR experiences.

CoreMotion

Use **CoreMotion** to access the device's **motion sensors**.

SwiftUI

Improve iOS app **architecture** and **design** through SwiftUI.

Developed App & **DEMO**

View stars as 3D objects placed in the real world.

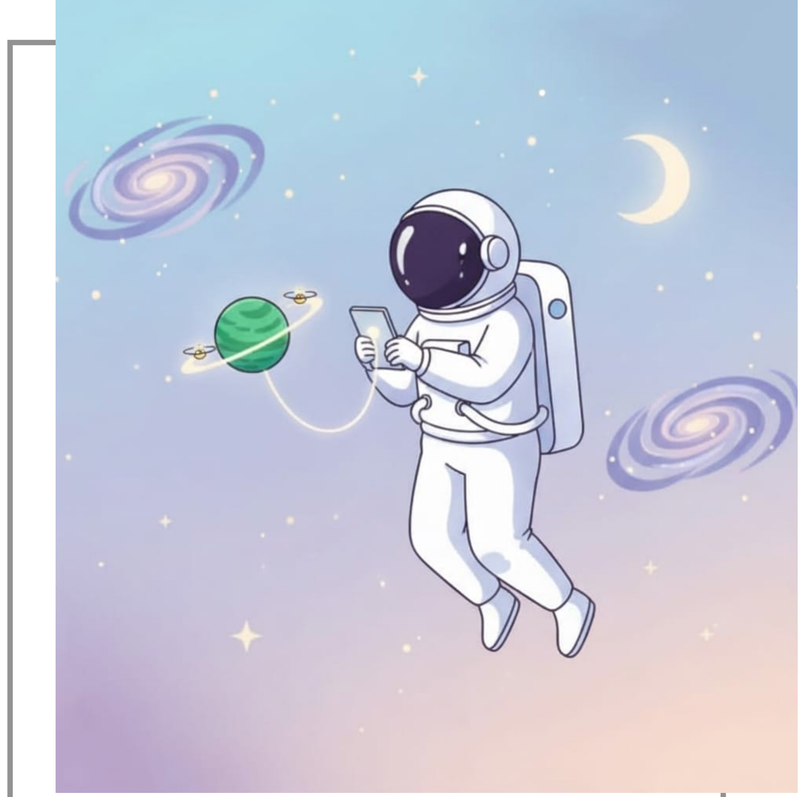
Switch between camera AR mode and a 360° galaxy panorama.

See the app fully aligned to gravity and magnetic north.

- Smooth mode transition
- Labels always face the camera
- Large 3D environment sphere for the galaxy view
- Even indoor, Galaxy View allows exploration

App
Icons

Any appearance



Tinted

Next Steps

Future improvements

Enhancements planned for the next phase of development.

Astronomical data

Real astronomical catalog data for accurate sky positioning.

Star info

Tap interactions to show information about each object.

Improved design

Draw constellation lines and shapes and optimise dark mode colours.

Zoom

Pinch to zoom in/out and bring far-away objects closer.

GitHub Repository

QR CODE

https://github.com/micheladauria/MiniSkyExplorer

Explore the Cosmos with **Mini Sky Explorer**