



## NASA Space Apps Challenge 2025

"Embiggen Your Eyes" Solution

Interactive Space Exploration Through Satellite Perspectives

*Team: [Your Team Name]*

*Challenge: Help people see beyond human vision using satellite data*

# 🚫 The Human Vision Problem

Human eyes see only **0.0035%** of the electromagnetic spectrum

- ❌ No infrared vision (heat signatures)
- ❌ No microwave detection (cosmic background)
- ❌ No access to space telescope perspectives
- ❌ Can't experience how satellites actually observe space

Challenge: Give people satellite eyes



# StellarEye Solution

## Interactive satellite vision for everyone

- ✓ Multi-wavelength space map - Switch between optical, infrared, microwave
- ✓ Real NASA survey data - ESO, WISE, 2MASS backgrounds
- ✓ Mission image gallery - Voyager, Hubble, JWST archives
- ✓ Google Maps for space - Intuitive exploration interface

Experience how satellites see the universe



# Real NASA Data Integration

## Authentic satellite perspectives

### Background Surveys:

- ESO All-Sky Survey (optical wavelengths)
- NASA WISE Survey (infrared heat signatures)
- NASA 2MASS Survey (near-infrared penetrating dust)

### Mission Images:

- NASA Images API (Voyager, New Horizons, Hubble)
- Real astronomical coordinates (Gaia star catalog)
- Progressive image loading with CORS proxy

# Live Demo Features

## Interactive space exploration

### Map Interface:

- Click celestial objects (stars, planets, galaxies)
- Switch survey backgrounds (optical ↔ infrared)
- Real astronomical coordinates (RA/Dec)

### Image Gallery:

- Multiple telescope perspectives of same object
- Advanced zoom/pan viewer
- Mission metadata and descriptions

 alt text

# ✓ "Embiggen Your Eyes" Achieved

## Giving humanity satellite vision

### Challenge Requirements Met:

- ✓ Help people see beyond natural perception
- ✓ Use real satellite data (NASA/ESA missions)
- ✓ Create interactive experience
- ✓ Educational and accessible