

# DESIGN PROJECT

By Estefanía Medina Duarte

## UNIVERSUM

### Project description

Universum is an AR application planned to function as a support in the teaching of topics related to the solar system and its various complements through more visual and interactive supports than those offered in traditional methods.

The application will use a plane of the solar system in A4 size to show the operation of the entire system and its appearance in 3D models, it will also work in conjunction with A6 size cards to show the different elements of the solar system such as stars or planets in a more specific way.

### Objectives

#### General Objectives

1. The application will be designed to work for different scholar grades (from 3rd to 6th), so it should be adaptable for each one of them in order to offer the required information according to the grade.
2. It is not planned to be used as a substitute for traditional methods, but as an aiding resource that applies more interactive and attractive methods for children.

#### Specific Objectives

1. Describe the movement of the Sun
2. Explain the eclipses and phases of the Moon in a Sun-Earth-Moon system.
3. Describe the characteristics of the components of the Solar System.
4. Represent the regular motion of the planets and some of their characteristics.

### Context

According to the study programs from the Secretary of Public Education (SEP for its acronym in spanish) children among 3rd and 6th grade take the course of Natural Sciences where it is taught about the solar system through different readings and practices outdoors, whereby the application will serve as support of a ludic and didactic type for this specific topic.

### Resources

- Photoshop - Design of the A4 map and A6 cardboards
- Sketch-Up - 3D Modeling, application of textures and materials
- V-Ray - Rendering
- Unity - Exporting of 3D models, addition of text and other features, and creation of mobile application (.apk file)

### Targeted age

- 8-11 years old
  - 3rd grade-6th grade