

# NIE LIBRARY TOUR USING AR & VR

## INTRODUCTION

Since 2017 NIE Library has leveraged on Virtual Reality (VR) and Augmented Reality (AR) technology to enhance users' access of library spaces and collections. By allowing users to interact with the library in both digital and physical spaces, we hope to engage users by putting a spin on the traditional library experience.



## VIRTUAL REALITY (VR)

The 360° Virtual Tour of the NIE Library utilises VR technology to simulate the physical space of the NIE Library on the virtual plane. By implementing the Virtual Tour on the library portal, we are able to enhance the user experience of visitors both within and outside our library's physical boundaries.

### PURPOSE

### TOOLS

- 360° camera
- Software (EasyPano)

### METHODS

- 1 Prepare numerous 360-degree photo (photo-sphere) of different spaces via camera with the ability to capture 360 degree photo.
- 2 On each individual 360 degree photo, add on interactive icons and link it to another scene, webpage, video or audio via software.



## AUGMENTED REALITY (AR)

The NIE Library has implemented AR technology on the pop-up books from the Children & Young Adults (CYA) collection to give users access to a fragile restricted collection. By implementing AR technology on an image of the book cover, we can overlay videos and 3D models and a user can 'flip' through an AR version of the pop-up book. This will give users a more holistic understanding that can encourage them to loan the pop-up book, while preserving the physical copy from damage by excessive handling.

### PURPOSE

### TOOLS

- vuforia
- unity

### METHODS

- 1 Use Vuforia tool to create database. The database will contain image targets, which are images that will be detected to trigger visual contents.
- 2 Import the database into Unity. Unity serves as the workspace to build the AR project. All the animations are performed based on the C# script created.



## DEMO



## GOING FORWARD

NIE Library is planning to leverage on Artificial Intelligence to further enhance user experience in the library by automating library services, moving towards the goal of a SMART Campus.



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