NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

School of Computer Science and Engineering

College of Engineering

3D Modeling Fullstack Mobile App

2D to 3D using photogrammetry

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Project Objectives:

The aim of this project is to develop a cross-platform compatible mobile application to generate 3D models (object/scenery) based on 2D input images taken from a smartphone camera. In addition, a photogrammetry pipeline has also been packaged into an easily deployable Application Programming Interface (API) endpoint as a backend service. By doing so, the author hopes to bridge average consumers to the 3D world and enabling them to easily build their own 3D models with widely available existing software and hardware.

Input 2D images → Interactive 3D Model

Cross-Platform (iOS/Android/Windows)

The mobile app is also developed with Flutter to allow for greater portability amongst different platforms. The app can also be connected to other 3D modeling backend endpoints such as Apple's Object Capture API to allow for different processing algorithms to generate the 3D model. At the same time, the photogrammetry API endpoint can also be called by other apps that require generation of 2D images to 3D models.

iOS   android   Windows