Personal 3D Object Viewer

Background:

While our primary product deals with scanning individuals using the iPhone's LiDAR scanner, for the purposes of this micro project, we'll focus on handling 3D data within an iOS app. Specifically, we'll be providing you with a mock 3D data file, which represents a hypothetical scan, and we'd like you to consider a simple viewer for it.

You can actually create a small, functional Xcode project if you like, but we respect your time and we really only expect you to write a description of how you would structure this application, and what each piece would do. (What classes or structs would you need? How would you organize them? What overall design pattern would you use [MVC, MVVM, etc.]?)

Objectives:

- 1. 3D Object Viewer:
 - Load and display the provided 3D object (mock LiDAR data) in the app.
 - Allow the user to rotate, zoom, and pan around the object to view it from different angles.
- 2. Gallery View:
 - Create a basic gallery/grid view where the 3D object is represented by a thumbnail.
 - Tapping on the thumbnail should lead to the 3D Object Viewer where the user can interact with the model.
- 3. Mock AWS Integration / Navigation:
 - Implement a sign-in page that mock-authenticates the user (just fake it using a hardcoded user/password).
 - * If this was a real application, briefly touch on, via comments, what are some of the best practices you might use for authenticating a user session?