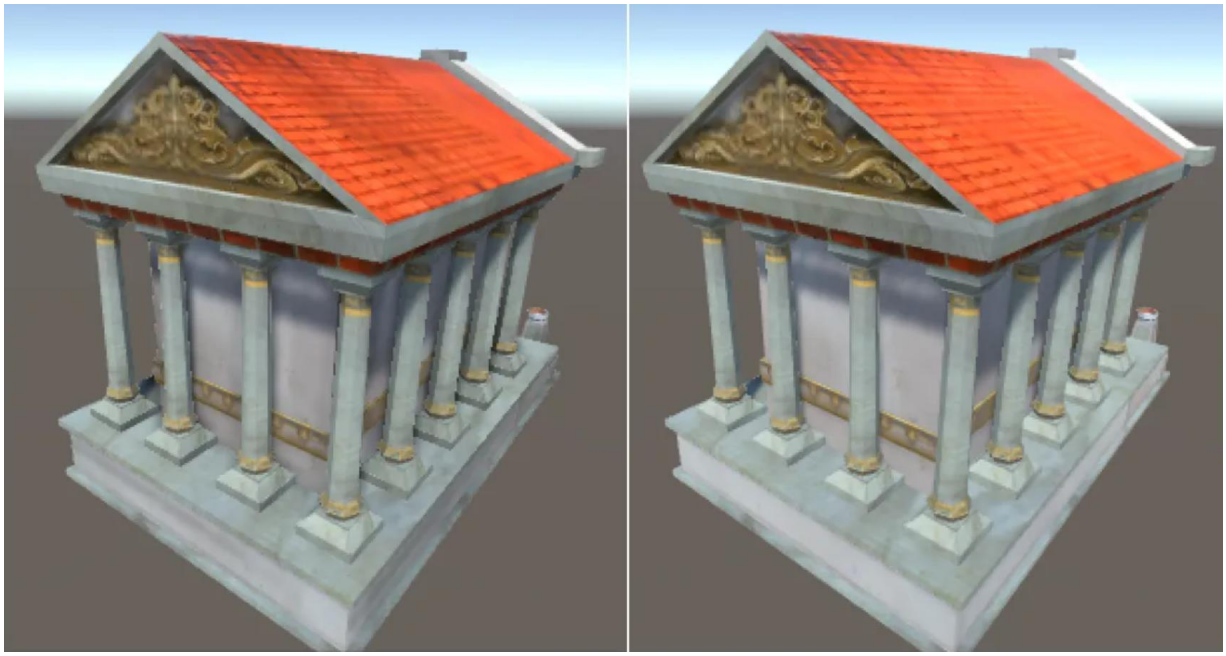
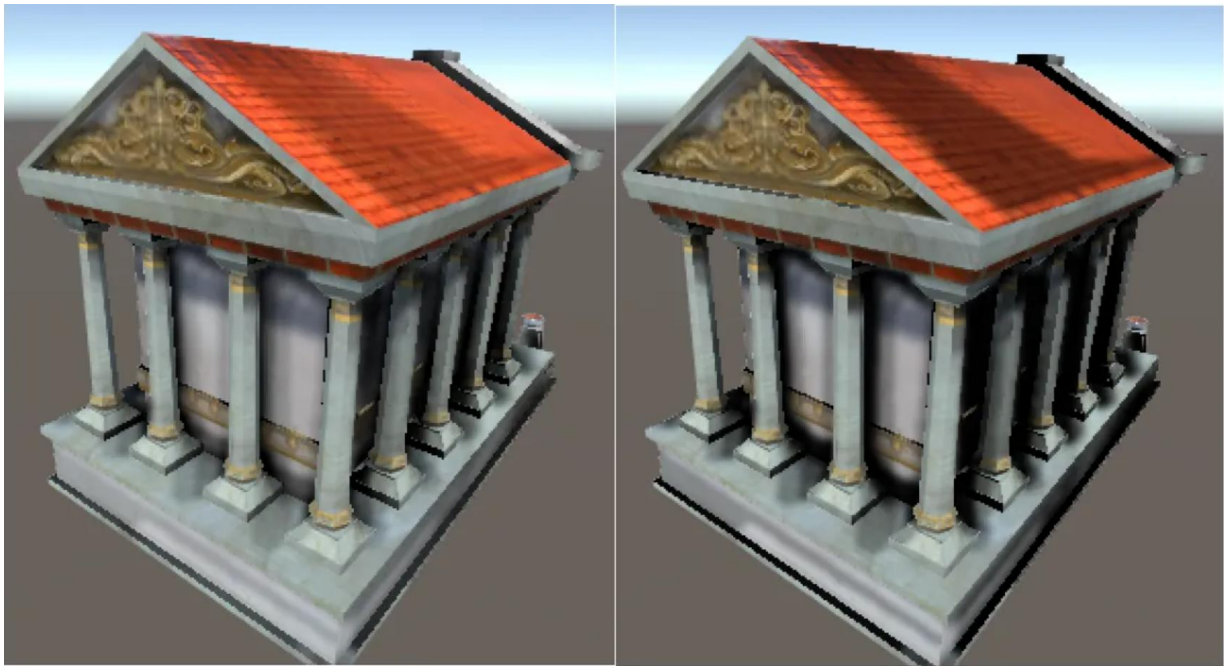
Project 2：Unity Shader SSAO

CG course project. Based on Unity Shader and GPU calculation, the program uses screen-space information to determine the amount of occlusion by darkening surfaces that are close to each other. Uses a scene's depth buffer in screen-space to reconstruct the coordinates of each fragment in camera space. Obtains the occlusion factor by taking multiple depth samples in a normal-oriented hemisphere sample kernel surrounding the fragment position and compare each of the samples with the current fragment's depth value. Blurs the AO texture through a bilateral filter to reduce noises and preserve edges. Analyzes the costs and compares the results.

Setting：Unity 2019.3.5f1，GPU NVIDIA MX450 2G



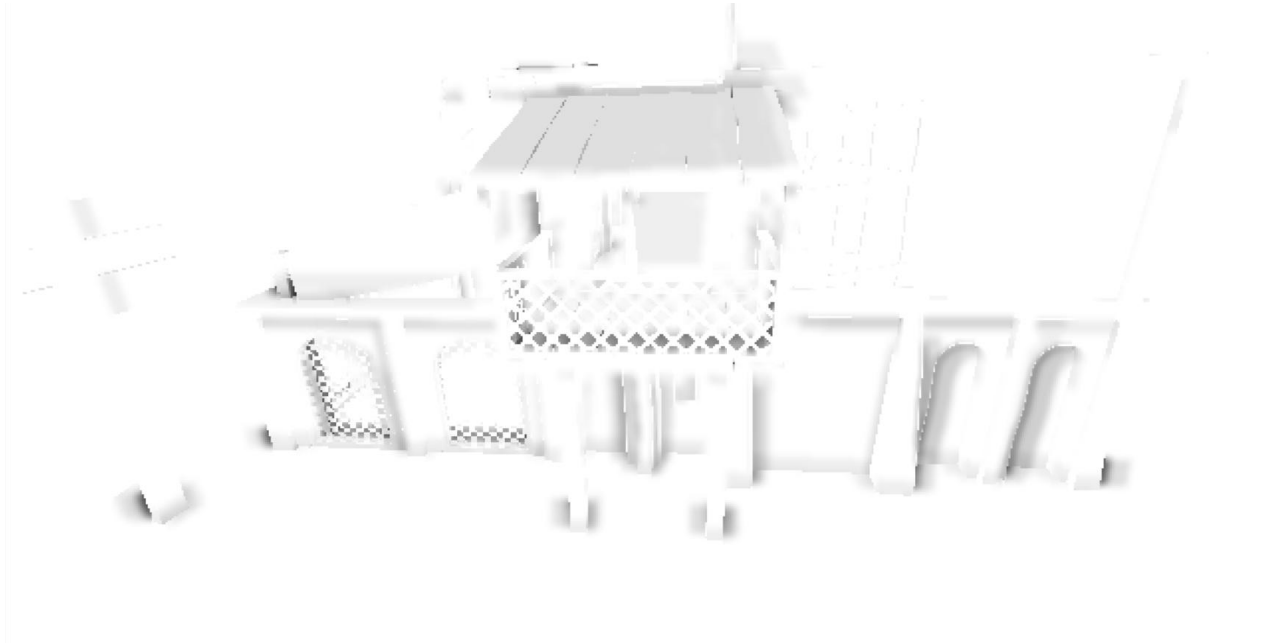
left：SSAO，right：no SSAO



left：AO Strength=3，right：AO Strength=5

no SSAO

SSAO



only AO